VOL. 161 — NO. 1

JULY 1, 1961

Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

Telephone companies don't take very long to restore service to their subscribers. Seven hours after a gas explosion demolished General Telephone Co. of Wis.' tile block C.O. building at Stone Lake, the switchboard was back in service. A temporary structure was erected and since only a few of the switches were damaged, some minor readjustments and the replacing of burnt wiring, made the switchboard completely operable.

Circulation This Issue
14,413 of Which
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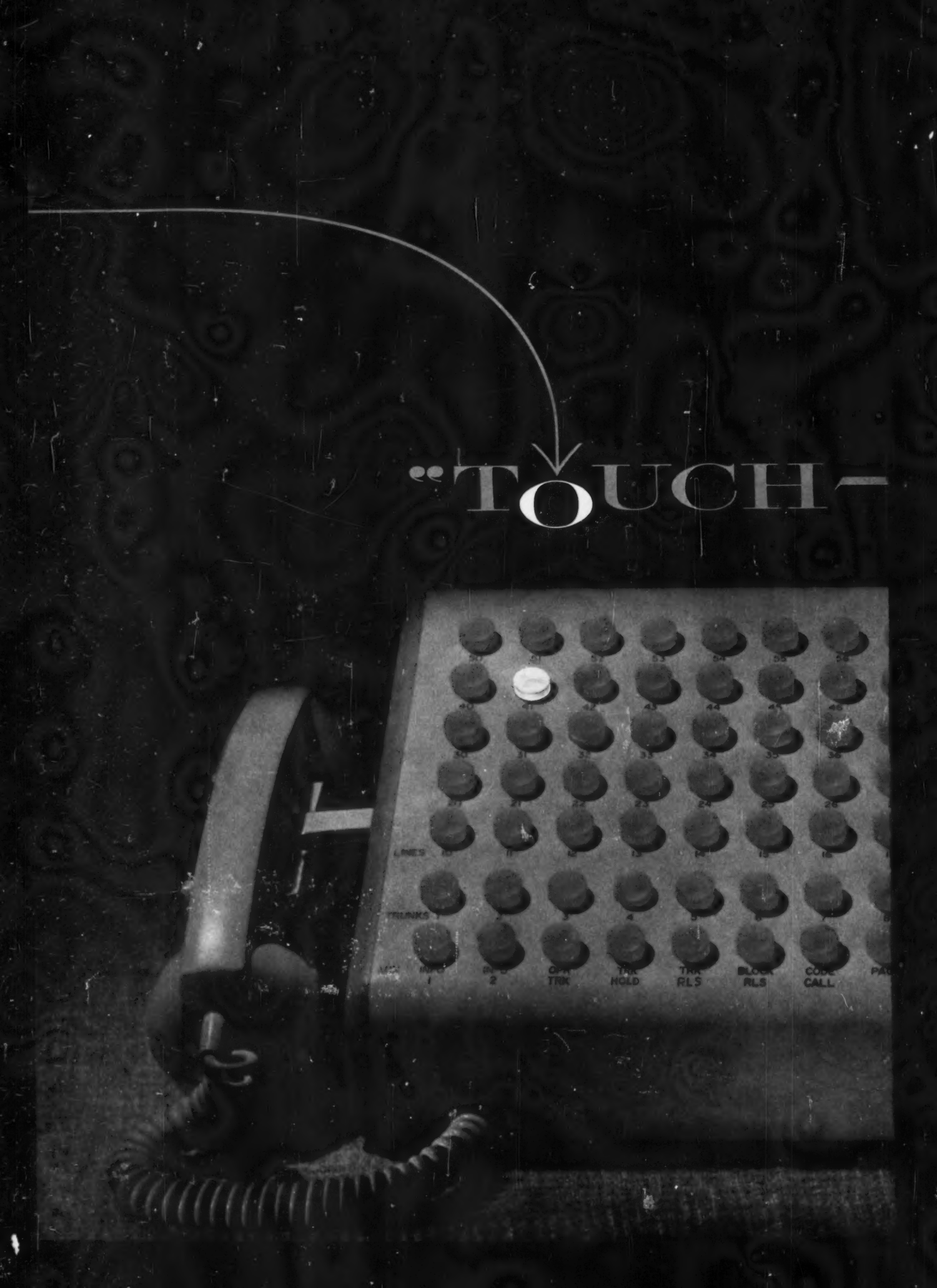
"TOUCH-



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The two-tone turret in beige, green or grey is fully equipped, completely wired with cable attached. Capacity 50 lines, 10 trunks. The equipment cabinet is compact, soundproofed, with self-contained power supply.

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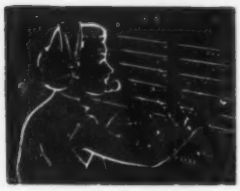

FLASHES AND PLUGS

OF BIRDS, BEES, AND—CAKE. In the *Short Hauls* section of the AT&T company magazine, we are reminded that our progress in strengthening the defenses of free peoples against aggression occasionally runs into complications.

In Yorkshire, England, a beekeeper feared that the super-intense radar beams might endanger his bees or their honey. He had to be assured that neither would the bees be cooked by the radar beams, nor would their honey suffer a change of flavor, were the bees to soar high enough to encounter the radar pulses.

The secretary of the Driffield Homing (Pigeon) Society, also in England, complained to the Royal Air Force that the jets screaming in and out of a nearby base demoralized his pigeons.

He wrote the RAF:

"My pigeons cower in their lofts and shudder every time a jet goes over. They are shivering nervous wrecks, too scared to fly."

The RAF promised to help.

Even in the U. S., problems arise near air bases. Eleven-year-old Bonnie Weisberg, who lives near an Air Defense Command base in Michigan, wrote the base:

"Between 1:00 and 1:30 p.m., there was a sonic boom. I had a cake in the oven to surprise my father, and, when he got home, he asked me, 'Where did you get the flying saucer?' Will you please tell me what you are going to do about my flattened cake?"

The air force responded with an 11-inch, three-layer cake, bearing the inscription, "To Bonnie, from members of the First Fighter Wing."

•

CERES SMILES ON POLE CROP. After promoting colored telephone for years, Pacific Telephone & Telegraph Co. recently found itself with colored telephone poles.

The color, in this instance, was provided by the Ceres, Cal. Teachers Association as part of the recent Ceres Paint-Up Festival.

Telephone poles in downtown Ceres were in color, coordinated to match nearby buildings, and they were given an extra touch of color by having either sheafs of wheat or grapevines painted on them.

The two-day Paint-Up Festival found the whole town turning out, paintbrush in hand, to help spruce up the city.

Telephone crews pitched in on the all-community project by setting up a public address system and helping to plant more than 100 trees in the downtown area.—Reported in Pacific Telephone's *Panorama*, June, 1961.

CHANGE OF ADDRESS

Please notify your local postmaster and the Circulation Department of TELEPHONY of change of address. Change cannot be made without the old as well as the new address. Allow three weeks for change of address to become effective.

Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

1901 — 60 years — 1961

July 1, 1961

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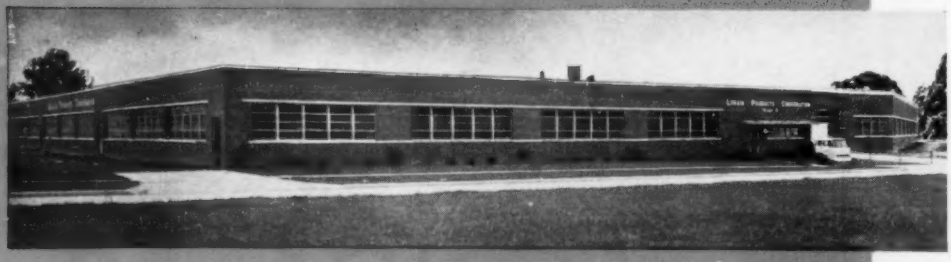

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REPORTS MR. W. M. GRISWOLD, PRESIDENT,
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Exchange Unit for 49-18-3AZ Leich Line Concentrator. Shown are (left to right) J. Fred Allen, District Manager, and Mr. W. M. Griswold, President, Trumansburg (N. Y.) Home Telephone Company.

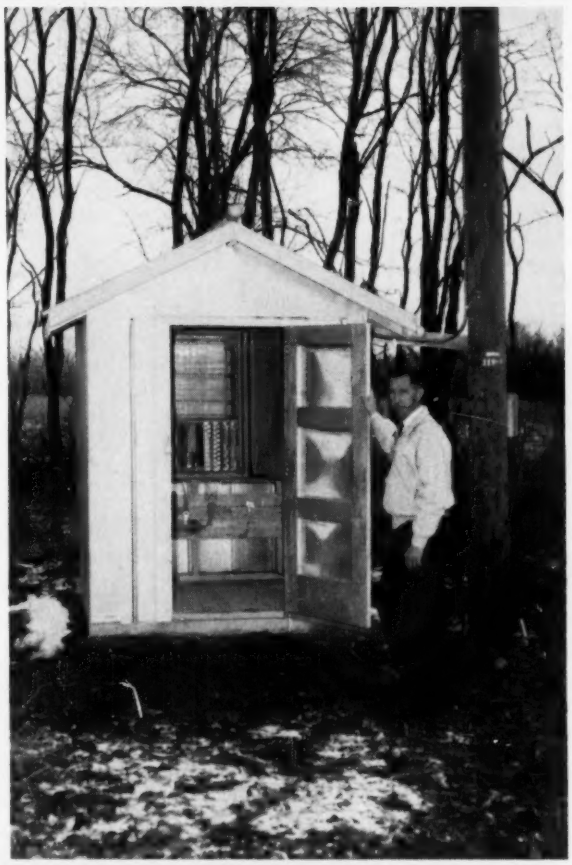
Mr. Gene Sabin, Central Office Supervisor, with Line Concentrator Subscriber Unit mounted in small building.

"Leich's Line Concentrator saved us $8,000 when compared to the alternate cost of cable relief!" reports Mr. W. M. Griswold. "The unit improved service at low cost in two small hamlets about five miles from our central office in Trumansburg, New York."

The cost-cutting story: Mr. Griswold found it necessary to provide more circuits in the area in order to add rural lines and upgrade service. Since the existing cable was working at 100% capacity, he would normally have had to add cable from the central office at an estimated cost of $13,000.

The installed cost of the 49-18-3AZ Leich Line Concentrator was only $5,000. Instead of serving each line over a separate wire pair, it concentrates a number of subscriber lines over a much smaller "high usage" trunk group. It used 21 pairs of the existing 51 pair cable to furnish 49 lines—for a net gain of 30 cable pairs!

You can enjoy the benefits of Leich's Line Concentrator, too. To learn how, just send in the coupon.



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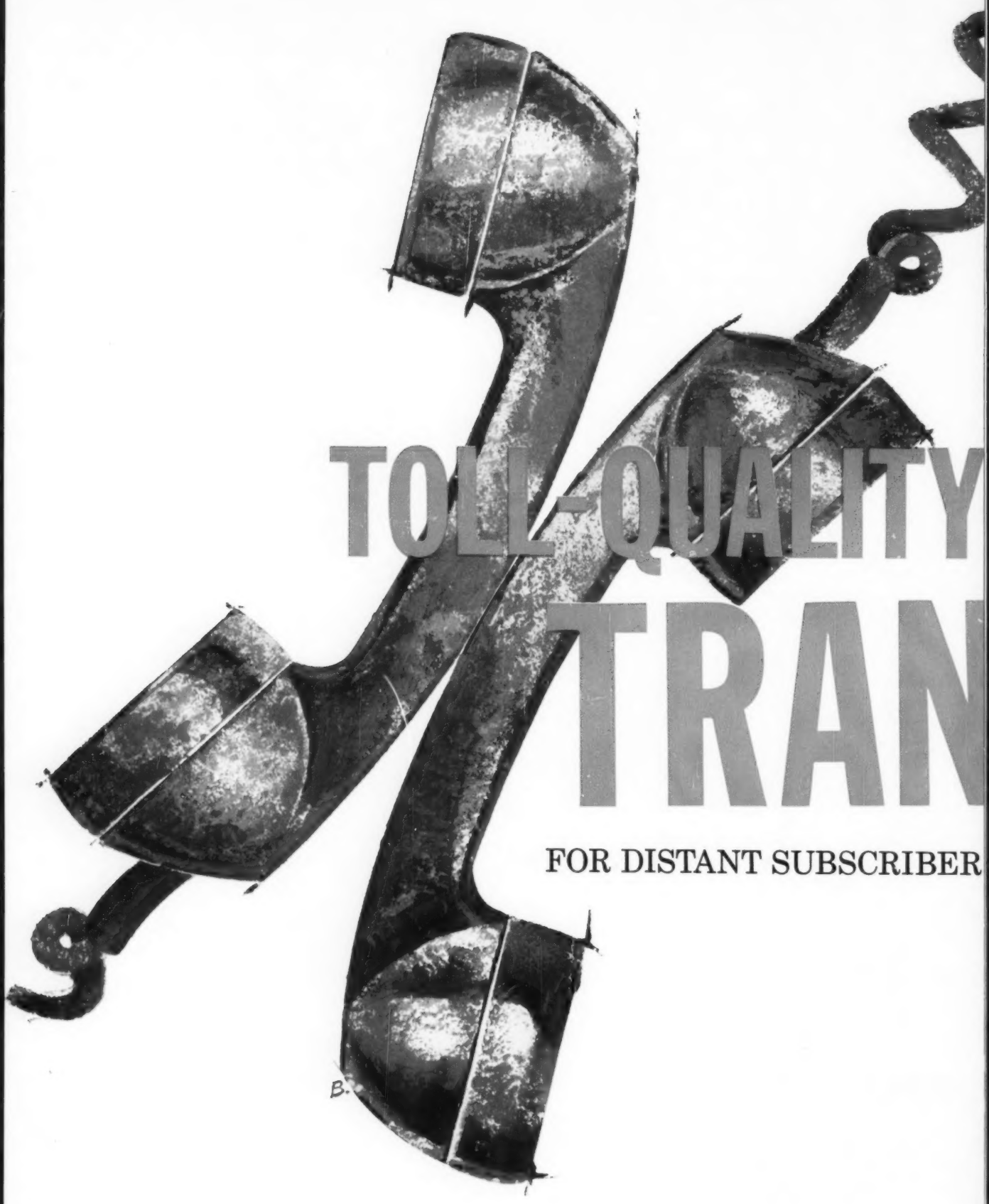

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FOR DISTANT SUBSCRIBER

when capital is tied-up, and new service demands exist...

independents start thinking "carrier," in order to get maximum use from existing facilities. And, when you think "carrier," you naturally think "Kellogg"—the leader in carrier design, development and manufacturing. Without a doubt, it's the most complete, and most completely field-tested carrier line in the industry.

ITT Kellogg K-31 and K-32 Carriers offer more exclusive features, yet are lower in cost.

K-31 RURAL SUBSCRIBER CARRIER

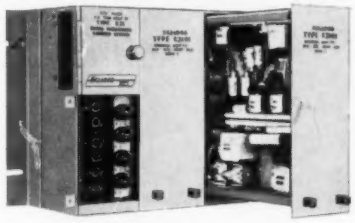
Provides high grade, low cost service between a central office and rural subscribers on single or multi-party lines. Up to 8 channels. Can be utilized to meet future growth needs.

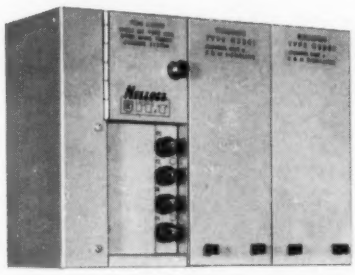
K-32 OPEN WIRE TRUNK CARRIER

Provides low cost EAS or toll service between two central offices. Also up to 8 channels.

And now, system mileage can be *doubled* with one low-cost repeater, *tripled* with two repeaters!

Next time you get caught by sudden new service demands, conserve your capital: find out about carriers, from carrier experts. Call your ITT Kellogg representative or write the ITT Kellogg Regional Office nearest you.





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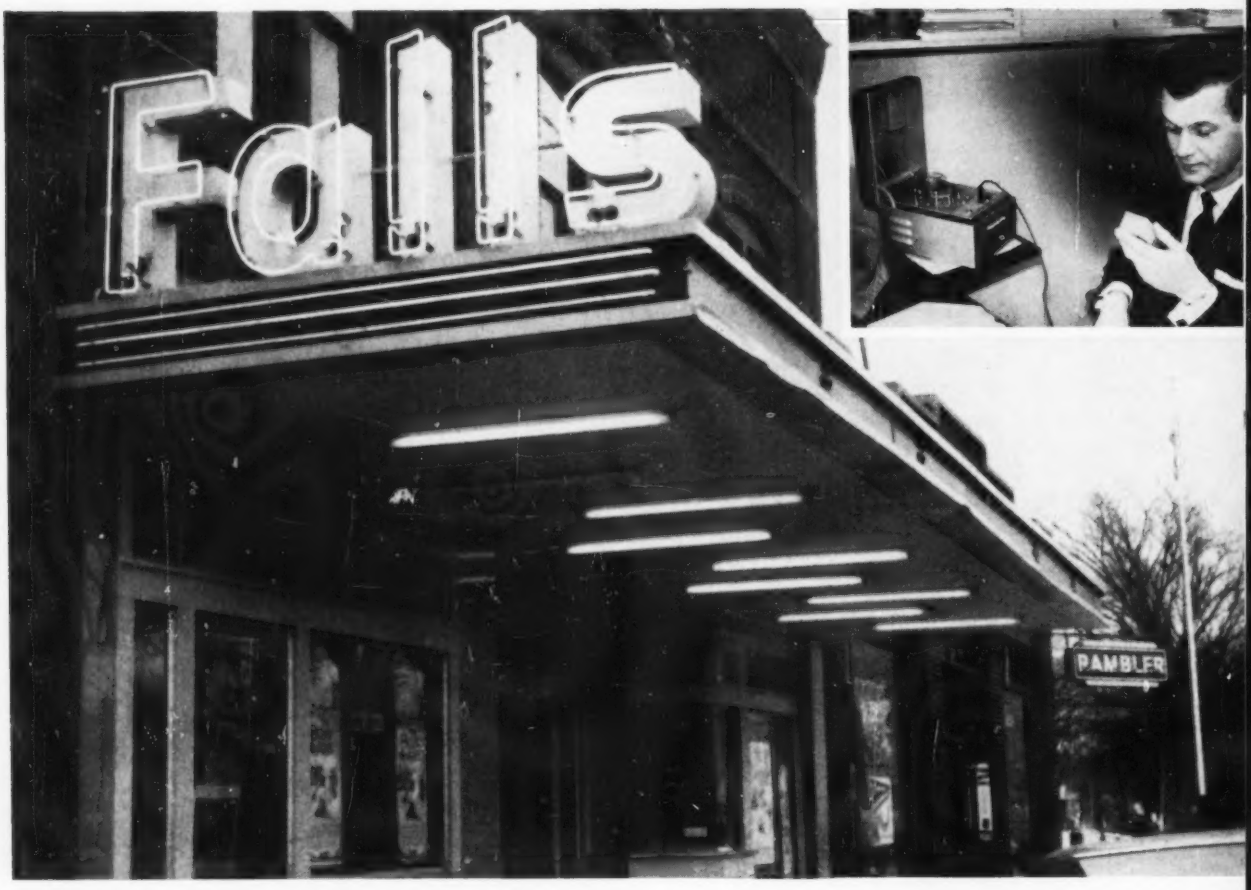

"This Electronic Secretary® set has increased my theatre gross by as much as 25%"

GERALD BARES, ***Owner of the Friendly Falls Theatre, Black River Falls, Wisconsin***

In a letter to the General Telephone Company of Wisconsin, Mr. Bares says he would never be without an Electronic Secretary telephone answering set.

"It is more effective, yet less expensive than advertising media such as newspapers and radio. In fact, patrons do not refer to newspapers for movie ads anymore. They depend on this phone service."

Mr. Bares uses the Answer Only model Electronic Secretary set to inform patrons of present features, starting time of each picture, and of coming attractions. He, like many other theatre owners, chose the AO model because it serves his purpose adequately. It answers the telephone with an announcement message that answers all the questions most likely to be asked by the callers. And . . . he can change the message, at will.

Electronic Secretary answering sets are available from YOUR telephone company at a very nominal fee, which is added to your monthly phone bill. Service on the unit is handled by the telephone company at no cost to you.

Join the many theatres, churches, supermarkets, etc., that now handle a big percentage of their telephone calls the modern way . . . with an Electronic Secretary telephone answering set. Contact your Telephone Company business office for more information.

Ask your telephone company for more details

ELECTRONIC SECRETARY®

MODEL **AO** (Answer Only)

THEATRES are excellent prospects

A large percentage of phone calls to theatres are questions that could be answered with a simple recorded announcement. Questions like "What's playing today". . ."When does the next show start". . ."What's playing next week."

Many owners and managers throughout the country are installing AO model Electronic Secretary sets to answer these and other questions that pertain to theatre activities. This leaves them free to perform the more important duties. In many cases, it eliminates the need of an "extra" girl to handle this time consuming job.

ADDED PHONE COMPANY REVENUE

An AO (answer only) model usually means increased income from two facets. (1) An extra station to handle these special calls, and (2) the Electronic Secretary answering unit itself (rental and installation charges).

A proof of the opposite page is being mailed to you. Use it as a sales tool. Show the theatre owners in your area how they can increase the flow of traffic into their establishments, just as Mr. Bares and others have done.

The AO model is also ideally suited to Supermarkets (many use it to announce daily specials, recipes, etc.), Stock Brokers (for latest markets and Dow-Jones averages), Churches (prayers and inspirational messages), or anyone who wants the advantages of automatic answering but does not need incoming messages recorded.

Electronic Secretary Industries, Inc., Subsidiary of GENERAL TELEPHONE & ELECTRONICS

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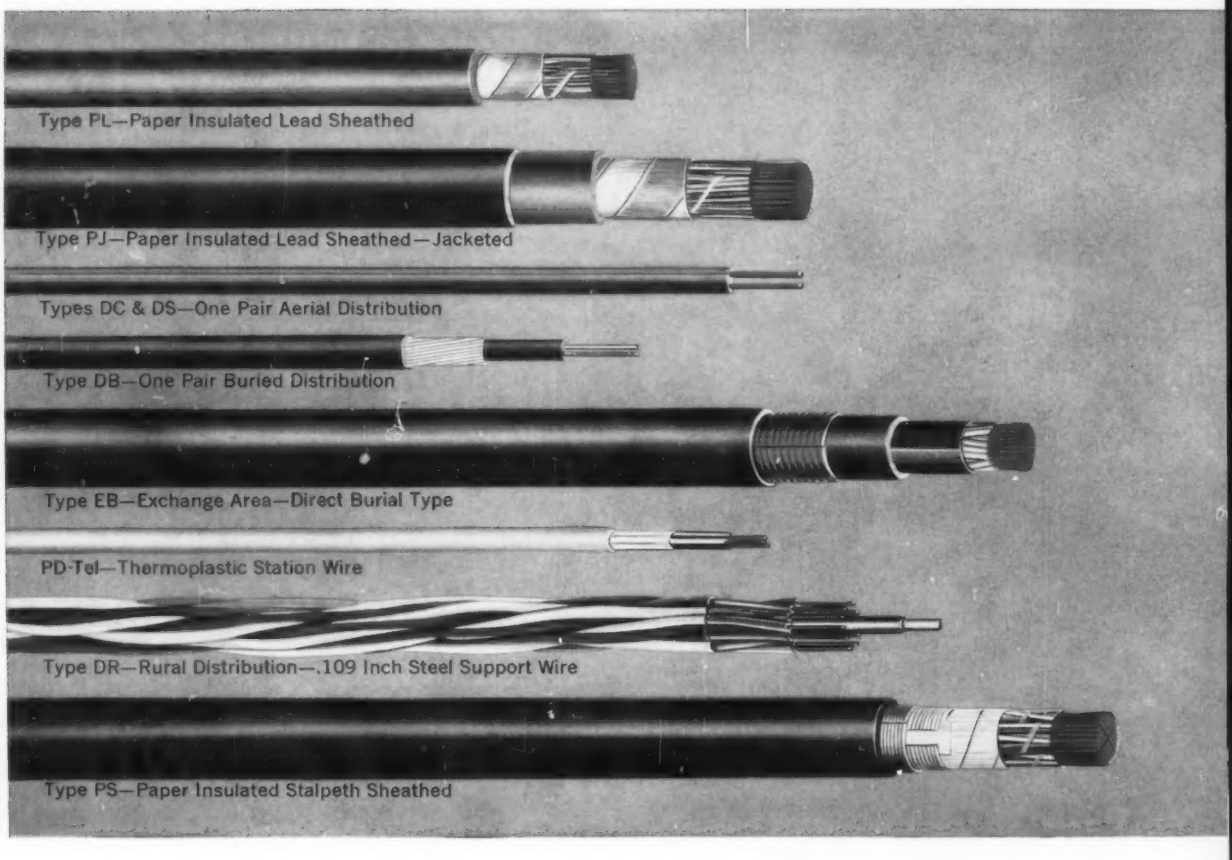
Type PL—Paper Insulated Lead Sheathed
Type PJ—Paper Insulated Lead Sheathed—Jacketed
Types DC & DS—One Pair Aerial Distribution
Type DB—One Pair Buried Distribution
Type EB—Exchange Area—Direct Burial Type
PD-Tel—Thermoplastic Station Wire
Type DR—Rural Distribution—.109 Inch Steel Support Wire
Type PS—Paper Insulated Stalpeth Sheathed

Throughout the manufacture of Phelps Dodge telephone wire and cable, product dependability is given major attention.

Phelps Dodge builds reliability into every cable by using the finest materials and by applying years of experience in the research and development of communications cables to control the quality of these materials during fabrication. The result is a complete line of wire and cable with assured dependability that helps reduce maintenance costs and provide longer service life.

Phelps Dodge will gladly help you select the correct construction to fit your particular requirements. Just call your nearest Phelps Dodge sales office.

IS THE FIRST CONSIDERATION TELEPHONE WIRE AND CABLE!

Type IN—Interior Cable
Type PA—Paper Insulated Lead Sheathed—Armored
PD-Tel—Paralleled Figure 8 Drop Wire
PD-Tel—Polyethylene Insulated Bridle Wire
Type EA—Exchange Area—Aerial Type
Type RL—Rubber Insulated Lead Sheathed
Type ED—Exchange Area—Duct Type
PD-Tel—Paralleled Reinforced Drop Wire

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Teen-age chatter is an important matter for all telephone companies

As a matter of fact, it's often a matter of *extra revenue!*

That's because teen-age girls are enthusiastic users of telephones. Teens are keen promoters of extension phones. They're good customers of public phones.

And, most important, today's young ladies are tomorrow's homemakers.

A look through the advertising pages of leading teen publications will show you how the Bell System encourages girls to use the phone often—and use it correctly.

Our advertisements suggest constructive uses for phones at home as well as public phones. And they emphasize the many values of telephones everywhere.

This advertising is designed to help all telephone companies build lifelong friendships with the youth of America.

Bell Telephone System

NO. 6 OF A SERIES

* The thing to remember about Warren TMR's (Transistor Multi-Ringers) is that they have long been known (at least since the Aztecs, who some say were the first to put in a hurry call during a hurricane) to provide stable, continuous, on-frequency ringing even when commercial power fails.

Here are a few more advantages provided by Warren TMR's:

- Battery operated — does not depend on commercial power.
- Long life — each component is conservatively derated for trouble-free operation. Designed for 30 year life.
- Stability — unique zero phase shift oscillator circuit holds all ringing frequencies to a drift of less than 1/6 cycle, eliminating need for any frequency adjustment.
- Compactness — most space-saving design available — requires only 10½″ vertical space on 19″, 23″, or 30″ ralay rack.
- Power savings — requires just 1/3 to 1/10 the power of other ringing generators.

Warren offers a complete line of Transistor Multi-Ringers and Single Frequency Ringers in 25 and 50 watt sizes, none of which look very much like those in the drawing. (We've corrected the situation below.)

Please write for complete information.

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TYPE TFR — Transistor Float Rectifiers

TYPE TPP — Transistor Power Packs

TYPE TMR — Transistor Ringing Generators (25 & 50 Watt)

TYPE TRT — Transistor Ring Talk Power Supplies

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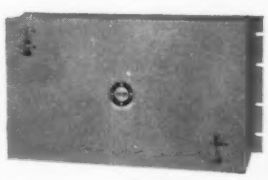
This is what a Warren Transistor Ringing Generator really looks like.



FIRST IN TRANSISTOR PRODUCTS FOR THE TELEPHONE INDUSTRY

IN THE NATION'S CAPITAL

BY FRANCIS X. WELCH AND LAWRENCE J. HOGAN
WASHINGTON EDITORS OF TELEPHONY

FCC Chairman Minow testifies before House committee on interstate toll rates and satellite communications . . . Kennedy Administration moves to help REA electric co-ops. U. S. Supreme Court's decision in Looper case discussed.

FCC CHAIRMAN Newton N. Minow set the stage on June 16 for a possible reduction in long distance telephone rates. Testifying before the House Anti-Trust Sub-committee, Minow said the FCC was engaged in "comprehensive discussions" with American Telephone & Telegraph Co. and has the interstate long distance telephone rate situation under "careful and continuous study." This, of course, is nothing new. FCC reviews telephone operations constantly and periodically discusses matters with AT&T representatives.

This seems to be an era of reverse incentives. The telephone industry, by increasing its efficiency of operations, is able to give consumers outstanding long distance service for rates 20 per cent below what they were prior to World War II, but the rewards for this performance are constantly in jeopardy.

The last reduction in interstate long distance rates came in September, 1959, after the FCC found that the Bell System's return of 7.7 per cent on its interstate and foreign business was too high. A 50 million dollar slice was supposed to reduce earnings to about 7 per cent, but technical developments, efficiency and a high rate of growth in interstate calls gave Bell a return of about 7.8 per cent during 1960. If 7.7 per cent was too high in 1959, you may be sure that 7.8 per cent will be considered too high at the present time.

"The Commission expects to be in a position to arrive at some definitive conclusion in the very near future as to what action, if any, is warranted in the circumstances," Mr. Minow told the congressmen. It is not likely that a rate case fight will develop. The Bell System will probably consider voluntarily a settlement for lower long distance rates, as it has so many times in the past, when the FCC decides that long distance profits are too high.

Vertigo in Space

As further discussed in this department, Chairman Minow also took advantage of his appearance to tell the House Anti-Trust Sub-committee that the FCC was seeking a formula to insure that no single company—he didn't mention any names—will dominate or control the operation of the first U. S. private space satellite communications system. Minow told the legislators the same thing he said at a press conference a few weeks ago: The communications space satellite program has top priority at FCC.

The administrative problems appear to be offering more difficulty than the technical problems. FCC has had to change its tack on ownership of the system. Several weeks ago an FCC report favored limited ownership, of the communications satellite system, but the Department of Justice, suggested that the participation in the program be broadened so that the anti-trust laws will not be violated. This caused the FCC to re-evaluate its position. "We want all companies to contribute their know-how," Minow told the sub-committee, but he added that "too many cooks might spoil the broth."

Co-op Honeymoon

Co-ops are apparently in for a long and enjoyable honeymoon with the Kennedy Administration. President Kennedy has promised to "restore REA to its former role of pre-eminence—freeing it from constant concern over political interference, higher rates of interest and budgetary starvation." Symptomatic of the trend is the recent $60,225,000 REA loan to Hoosier Cooperative Energy, Inc. of Osgood, Ind., to build a 198,000-kilowatt generating plant. This is the largest loan in REA's 25-year history.

The same philosophy is evident in the appointment of Joseph C. Swidler, former general counsel of the Tennessee Valley Authority, as a member of the Federal Power Commission. Mr. Kennedy wants the 54-year-old Nashville lawyer to be chairman of the FPC and is prepared to go to court over his preference if Republican-appointed Chairman Jerome K. Kuykendall declines to bow out. Although Mr. Swidler is probably a fine, upstanding public servant, his appointment reminds your Washington editors of sending a fox to guard the chicken coop, inasmuch as his career has been in public ownership and now he is to be boss of the regulated private electric companies.

Many electric cooperatives throughout the country are taking advantage of Uncle Sam's 2 per cent money and tax-free status to launch extensive industrial development drives. The electric co-ops now sell 60 per cent of their output to non-farm customers and are servicing a growing percentage of city homes and industrial concerns.

Norman Clapp, new administrator of REA, leaves no room for doubt regard-

ing the administration's stand on co-operatives. "We are going to be in the fight to help cooperatives maintain their territorial integrity. Each year, more cooperatives are threatened around the nation as municipalities annex more of their service areas." He says further that if private utility suppliers demonstrate "unfriendliness" toward their co-op customers, the federal government may lend the co-op enough money to build its own generating plant, as it did with the Hoosier Co-op.

"We do not believe that it is enough to judge the desirability of new generation and transmission starts from the standpoint of adequacy, dependability and lower cost alone," he said. "We must also be sure that the cooperatives enjoy a supply of power—now and in the years ahead—that will guarantee the cooperative device a permanent place in the American power industry."

REA Telephone Loan Standards

In a new policy bulletin, REA has revised equity and other loan security standards with the aim of encouraging local ownership of rural telephone facilities and discouraging speculative ventures with telephone loan funds.

The main changes and additions of the new policy are:

(1) Where the proposed system is not locally owned and controlled, owners must provide a specified minimum net worth as a condition of obtaining the loan.

(2) As a general rule, the agency will not require additional net worth to secure loans required for improving and extending service within areas already set through prior REA loans.

(3) An applicant must obtain approval from the REA of acquisition proposals before commitments are made. If REA feels that the acquisition price is so high that it would seriously affect rates, the loan will not be approved.

(4) A loan for the purchase of property that is not a logical extension of the existing system will not be approved.

(5) In judging the net worth requirement, REA will not consider as equity any funds obtained from sale of stock if the stock is purchased with funds borrowed from a company which is already an REA borrower, or if the stock is purchased by a corporation which is an REA borrower.

(6) The mortgage which the borrower signs with REA will contain prohibitions against making loans or advances to officers, directors, stockholders or employes.

Loans already signed will not be affected by the changes.

Satellite Race Wide Open?

FCC Chairman Minow has thrown another curve in the tangled proceedings now going on before the FCC to figure out who will get the first space communication satellite off the ground.

Clarence H. Linder (right), outgoing president of the American Institute of Electrical Engineers, pins a badge on Warren H. Chase, Cleveland, AIEE president-elect, and vice president of the Ohio Bell Telephone Co. Mr. Chase was elected president of the institute at the summer general meeting of AIEE at Cornell University on June 19.

(If the FCC goofs or snarls this one too long, it could become another "first" for the Kremlin boys.) It will be recalled that when the invitations first went to companies interested in this project, manufacturers and domestic telephone companies, were "included out"—leaving the preliminary proceeding, at least, to the AT&T, ITT and other "international carriers."

Then the manufacturers and domestic carriers, including General Telephone & Electronics Corp., complained and the FCC revised the invitation list. But there were statements made, thereafter, that it might be a good thing to keep the project confined to experienced persons. Now Chairman Minow has explained to the House Anti-trust Subcommittee that no one company will be permitted to dominate the proposed satellite communications system.

If ownership in the proposed "joint participation" company were based on use of the satellites, it has been estimated that AT&T would control about 80 per cent of the setup. But Chairman Minow assured the House Committee "the commission would not in my judgment go along with any system based on use, because that would give the user a dominant position."

The House sub-committee, incidentally, has launched its investigation because of concern over possible anti-trust aspects of the space satellite derby. Eight companies, including AT&T, have drawn entry cards, so far. The House sub-committee also heard testimony from Justice Department's anti-trust chief, Lee Loevinger, that equipment manufacturers, such as General Electric, and domestic communications companies, such as General Telephone and Electronics, should also be allowed to share ownership in the new system, in order to lessen chances of monopoly.

The Looper Case

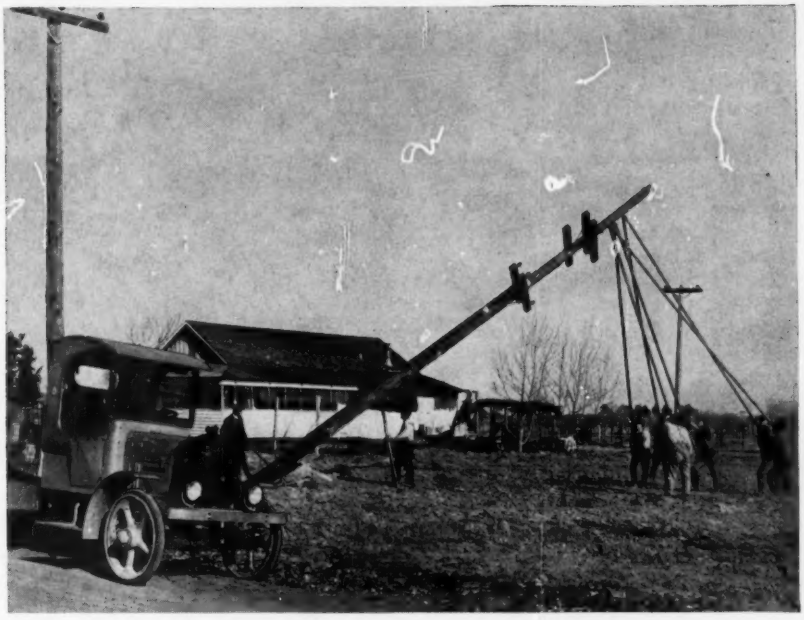
Last week the U. S. Supreme Court decided the celebrated Looper case. The only specific connection between this controversial case and utilities was the fact that it concerned several employes of the Southern Railway, among others, Nancy Looper, from whom the case takes its name. Nancy and the other Southern Railway employes, apparently were somewhat less than dyed-in-wool Democrats. Since they are all from Georgia, or thereabouts, perhaps they might be called dyed-in-cotton Democrats. Whatever called, they objected very strenuously to their union dues being used for political propaganda and other purposes to which they were very much opposed.

They found, however, that their employer, Southern Railway, pursuant to federal law had signed a closed shop agreement with their union (the machinists) under which dues were deducted from paychecks, and *nobody* except dues paying members could be employed. This meant that, in order to hold their jobs, these workers had to join a union not of their own choosing, and stand by and see their own money (collected as dues) spent to elect political candidates, or otherwise assist candidates and policies, to which they were opposed. They claimed that this was a form of tyranny. The Supreme Court of Georgia agreed. The state court added that if the only way a citizen could earn his living was to be forced into a union and support (by dues) a political party repugnant to him, such an arrangement was unconstitutional. The Georgia court, therefore, held both the union contract and the closed shop agreement invalid.

But five Justices of the U. S. Supreme Court, in an opinion by Justice Brennan, said the Georgia court went too far, and sent the case back to work out some way of making the unions give back to the Looper group, that part of their dues money spent to their political dissatisfaction. Otherwise, Justice Brennan said, the closed shop agreement is okay, and the political activity of the union is okay. The lower court will now have to find a method for protecting the minority dues-payers from having their money used for purposes exactly contrary to their own political beliefs.

Justice Black wrote a forthright dissent, to the effect that the Georgia closed shop was a heck of a way to run a railroad, if it violated the right

(Continued on page 51)



The old method of setting poles. A crew of eight men struggles to get a pole to position, while the truck stands idle.

Trouble Clearing in the "Old Days"

Techniques and methods developed by repairmen and linemen in early years, coupled with their courage and endurance; contributed importantly to the progress of the telephone industry in succeeding years.

By GILBERT R. BRACKETT

I SUPPOSE many of the telephone repairmen of today have been in the business long enough to remember when the radio first put in an appearance and the headaches that came from the aerials of the then popular "toy." I suppose, too, many of these "bug hunters" have at some time or other had an experience similar to the one that plagued my friend Lew Cutting, one cold, blizzardy winter's day many years ago.

Lew had been battling waist-deep snow drifts all day long, fighting toll line defects. The wind combined with blinding snow to swing sagging line wires into will-o'-the-wisp cases of trouble. Lew was not only dead tired but numb with cold. He was desperately hungry, too. He was miles from any town, out in the open where the wind tore at him in full force. It drove through his heavy clothing with sharp stabs of misery whenever it became necessary to climb a pole for a test.

After "Bug" for Hours

As he finally drove along on the way back toward the office he was angry with the world in general and lady luck in particular. He had been after this particular "bug" for hours, or so it seemed to the cold-befuddled young man. He had just swung his way down a 30-foot pole on feet that felt like two lumps of putty. He was thoroughly disgusted. The fault that had bothered him for so long had finally turned firm and showed now to be within the city limits of his home town.

He turned on the truck lights. It was growing dusk and would probably be completely dark before he signed off for the day. He drove slowly and watched the lead closely. He didn't want to pass up the blankety-blank trouble. The wires of the lead stood out against the skyline as he entered Tracy and continued on even more slowly, more cautiously now that he was in town. He followed the lead as it ducked into an alley and kept on for only a short way when he slammed on the brakes with a muttered imprecation.

"I'll be jiggered! I should have known," he told himself. "After driving over half the county I had to come back to find a pesky radio aerial. . . ." He angrily swung the cab door shut. "I'll fix that baby," he declared.

He stabbed up the pole, his anger growing as he reached the top and a particularly vicious gust of wind slammed him against the cedar. There was a snapping noise as he broke off the board that held the offending aerial in place, followed by a sharp whine as the aerial slithered across the line wires. A short conversation with the testman and he was on his way down the pole.

"Now for the dirty work," he snorted. "I'll bet those folks will never hook another aerial to our poles after I get through with them!"

He lumbered up the steps of the back porch of a neat but old little home, his spurs clanking loudly in the cold air. His knuckles beat a sharp tattoo on the door that confronted him. A short pause and it was opened, disclosing a little gray-haired old lady with the happiest smile Lew had ever seen.

"Yes?" she chirped.

"Lady, I'm from the telephone company," Lew started out. "That radio aerial, well, well . . ."

Radio Fixer?

"Oh, I know," the little lady laughed. "You're here to fix our radio. It just quit in the middle of the most wonderful program John and I were listening to. How . . ."

"Who is it, Laura?" a deep voice asked.

"Oh, John, it's a man from the telephone company. He's here to fix our radio." She turned her head and spoke to someone in the room. "That's John my husband." Her voice choked a little. "The radio's been his only relief from monotony." Her eyes brightened and she smiled at Lew. "But for goodness sakes just listen to me. Here I am chatting away while you are standing out there in the cold, freezing. I just finished baking. I'll put on a pot of coffee and we'll have some freshly baked doughnuts while . . ."

"But, but, lady," Lew stammered.

Replaced Aerial

"There'll be no buts about it, young man," she interrupted. "You come right on in here. Anyone that'll come out in this kind of weather to fix an old couple's radio deserves the best in the world!"

What could Lew do? He no longer had the heart to tell this tiny bit of femininity that he wasn't there to repair their radio, that the telephone company didn't do such work. His climbers fell with a dull clunk to the floor of the porch. The warm doughnuts and hot coffee had cinched the argument.

Lew met the ailing John, a big hulk of a man who must have been very capable in his prime. The repairman ate several doughnuts and washed them down with cups of piping hot coffee. All the while the little lady kept up her chatter.

Lew finally excused himself. After a brief make-believe going over the radio set he went outside. It took him only a few minutes to restring the aerial to a shed at the back of the lot. When he came back into the room he was greeted by soft music. The thanks of the old couple was profuse and sincere. The little lady perched herself on the arm of John's chair.

Many Other "Bugs"

"Isn't the world filled with wonderful people, John," she cooed and laid her head on her husband's shoulder.

"Amen!" Lew agreed as he quietly closed the door after him.

But radio was not the only thing that caused trouble 'way back when. The first spring after the trans-continental lead was completed, trouble appeared in many spots along the 3,000-mile pole line, strange trouble that thwarted detection for a while and caused some wakeful hours for the testmen.

When the pods of the cottonwood trees burst, the fluffy seeds floated away to congregate by the millions upon almost any object they hit. The cross-arms of the trans-continental lead seemed to be one of their favorite resting places. They collected between the insulators. These masses of fluff grew in size until they enveloped the wires and caused enough leakage to unbalance sensitive phantom circuits. While this did not always throw the circuits completely out of service, it did make them noisy enough to interfere with transmission. Believe me, it wasn't long until cottonwood trees began to disappear all along the route of the trans-continental.

Christmas Tree Tinsel

I suppose old-time toll linemen can recall the horrors of the Christmas season brought about by the many cases of line defects that were almost as difficult to find as a bucket of granulated ohms. Somehow or other, a batch of Christmas-tree tinsel would invariably get hung up on a pair of toll line wires. Usually this happened in town where the lead passed by a two or three-story apartment house. I am sure the tenant who tossed that innocent looking bit of metal out the window did so without malice or forethought. Even so, it always landed on the toll lead and the "rat race" was on! Vagrant breezes floated that bit of "trouble" from one pole to the next and back again. Any known method

BLISS
TELEPHONE,
(IMPROVED.)
Cheap Enough for a Toy, and
Good Enough for Practical Use.
This simple little instrument is sure to meet a general want in supplying the place of Speaking Tubes and Electric Bells, at less than one-quarter of the cost. It has been thoroughly tested, and its satisfactory working insures its general use.
Complete directions for setting up, also 100 feet of composition wire, accompany each Telephone. Additional wire will be furnished by dealers at the rate of 25 cents per 100 feet. Retails for $1.00.

This advertisement featuring the Bliss telephone, which was introduced around 1880, appeared in a catalog of the retail and wholesale store owned and operated by the father of Mr. Brackett, the author. This indicates that telephone companies had outside competition in the early years of the industry.

how USITA promotes U.S.A. system of communications

Few industries can boast an association as responsible as the USITA or a membership more responsive to its influence. In awareness of public service, USITA is second to none. A fact that reflects the attitude of the Independent telephone companies which, individually, are committed to an unremitting program of seeking out and developing more serviceable methods and facilities. Which explains why Sherron steel booths figure so significantly in the modernization plans of more and more Independents.

Striking example of the kind of service Independents are offering the public is this twin-booth arrangement. As related by James H. Russell, pay station supervisor, Inter-Mountain Telephone Company, Bristol, Tenn., these two-color Sherron steel booths (white top, red bottom) are situated on the main route through Kingsport...at a traffic light...with plenty of parking area.

as exemplified by progressive INTER-MOUNTAIN TELEPHONE COMPANY

SEE OUR CATALOG IN SWEET'S — INDEPENDENT — Sherron ACOUSTIC V SEE-THRU STEEL—STAINLESS STEEL OUTDOOR AND INDOOR TELEPHONE BOOTHS

There's a Sherron booth for every location and budget in either zinc coated or stainless steel

SHERRON METALLIC CORP., 1201 FLUSHING AVE., BROOKLYN 37, N.Y.

of testing used in those days generally came up with the wrong answer. The trouble showed 10 to 12 miles toward the next town, but by the time the repairman reached the affected area the wind had shifted the treacherous bit of tinsel in the other direction and the fault appeared nearer to the testing office. The repairman usually ended up by starting at the office and climbing every pole until he found the fractious Christmas decoration.

Lineman Turns "Saboteur"

I recall one case of toll trouble between Sioux Falls, S. D., and Sioux City, Ia., that had my old friend Timber Woods, toll lineman, stymied for a long time. It seems that an itinerant lineman was fired from the job because of improper deportment, insobriety and plain peccancy. The lineman had threatened vengeance at the time he was paid off.

He made the threat good. About half way between the two cities, in one of the most inaccessible places along the entire lead, he climbed a 30-foot pole and carefully wrapped a piece of ringer-wire around two copper circuits, bringing it down the insulators and across the crossarm in such a way that it was hidden from the view of anyone on the ground. Of course, the man knew which circuits would raise the most havoc if they were out of order and chose these for his demoralizing get-even stunt. Poor Timber. It took him several days to locate the defect. He drove a slow plodding team mile after mile for tests, climbed poles until his legs felt as though they would drop off. But he finally got the job done.

Wire Thieves At Night

But the cause for real sacrifices, sweat and tears was the wire thief. He operated in the early days of telephony, usually at night. He would cut the toll line wires, pull out several spans and hurry these to some junk dealer where he received pin money for his work. The wire thief's depredations were finally stopped when it became a federal offense to interfere with the transmission of inter-state telephone messages.

Sometimes a lineman receives much notoriety for the performance of a spectacular deed. That is what happened when three toll circuits suddenly went open, isolating a small inland town. Fortunately, the toll line repairman for the district was reporting in for a test on a lead just a few miles from where the break had occurred. He was dispatched to the affected area at once, with an order to report to the testboard as soon as he reached the stricken area. Sometime later he hadn't reported, so an emergency crew was hurriedly assembled and sent on its way. They had quite a story to tell when they reported later over the repaired circuits.

Catches Bank Robbers

It seemed that the repairman had come upon the break in short order. He saw the wires had been deliberately cut and lay at the base of the pole. He stabbed his way up the cedar and attached his testset preparatory to reporting to the office. A surly voice at that moment ordered him to the ground. One look at the pistol in the hands of a vicious looking thug and he offered no argument. He came down in a hurry.

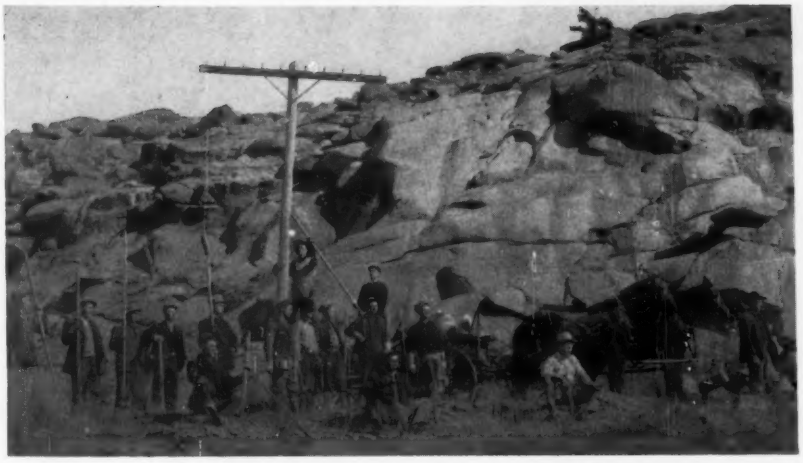
The man had bragged on how his pals were in the isolated town robbing the bank. The cutting of the wires assured that no leaks of what was going on would disturb the bandits. The bandit tied the young lineman and left him lying in his truck. Somehow he managed to loosen his bonds and, when the bandit came back to the truck to check the security of his prisoner, the repairman bent his connectors over the man's head and appropriated his gun.

Just then the young man heard the roar of a fast approaching automobile and surmized correctly it was the bank robbers returning to pick up their pal. A distant dust cloud in the direction of the town where the bank robbery had occurred confirmed his suspicions. He quickly crossed the highway, grabbed up the wires of the severed toll lines and raced around the pole once and then crossed the road and ran twice around a tree opposite the pole, secure from the eyes in the approaching car by a turn in the highway.

The relief crew arrived just as a pair of confused bad men tumbled out of a nearly wrecked car, hands held high because of the gun in the hands of the young lineman. The next day the press made much over his bravery.

Telephone companies in North Da-

In the early days, linemen worked from a cart, drawn either by a truck or a team of horses.



A telephone line construction crew in the old days.

kota use to have (and I understand, they still run into such difficulties) hoar frost which collects to the thickness of a man's arm on open-wire leads and causes all sorts of odd circuit performances.

Vermillion, S. D., was at one time plagued by a wasp invasion. These pesky insects settled on the town in swarms and invaded the privacy of homes and harried the folks who lived therein. The telephone company also had their troubles. The buzzing nuisances took over the pole cable terminals and defied eviction. There was no DDT in those days or any other insecticide that could be used on cable terminals, and be effective against wasps. It was a common sight to see an installer or repairman mount a terminal pole, remove the "can cover," let out a whoop and come down the cedar in full retreat from the stinging claim jumpers who had taken over the terminal as a home. Sometimes this happened just before a rain storm. For the short while the epidemic lasted wet cables were a common occurrence.

At one time a bat infestation disturbed telephone service at Mankato, Minn. During the day, many of these mammals roosted in cable terminals, at times placing every pair feeding from that particular group of cable pairs out of order. In those days there was usually only one cable repairman in a district, so subscribers whose telephones were affected by this sort of malady were often out of service for a longer period than usual.

Where the toll lead crosses the Mississippi River from Iowa to La Crosse, Wis., a "knocking" trouble developed. The testman was sure it was located in the long spans in the lead prior to crossing the river. A repairman was sent to investigate the trouble. He found there was little slack to speak of, not enough to cause any swinging trouble.

But the "knocking" showed up the next day when he tested in the same location. Again the repairman found nothing wrong. He drove on into La Crosse on other business. On his way back to headquarters, in the late afternoon, he passed by the troubled section of the lead, and the cause of the "knock" became an open book. Migratory swallows by the thousands were lined up on the top wires of the lead. Their combined weight was too much for the long spans of wire—they sagged into the circuits on the crossarm below.

Autos Were Novelties

It must be remembered that in the yesteryear of telephony the automobile was a novelty and had not reached the prominence it holds today. "Rigs" were rented from livery-stables. It took a lineman hours and sometimes days to clear trouble that, today, would be corrected in a comparatively short time. Testing devices were far below the capabilities of the present-day measuring equipment. Even so, some of the old-time testmen seemed uncanny in their ability to "hit the bug on the nose," no matter the distance from the testing office.

There are still some open wire leads serving our toll customers and they meet with trouble to be sure. But picture the present-day repairman driving along a paved highway in a heated car and then look back on the toll lineman of bygone days.

Often he rose before daybreak on a winter day, hurried through a hasty breakfast and usually walked a mile or so to reach the company's material shed, where other linemen, construction men, local installers and repairmen congregated to receive assignments for the day's work.

Our friend learns that the circuit between Omega and Clarien is grounded and his job is to find the trouble. Quickly he grabs up his canvas repair bag, hooks a small coil of copper wire on an arm and hurries to the livery stable.

The liveryman assigns him his usual rig, an open cart drawn by two shambling horses. If the liveryman is a particular friend and the day is colder than usual, hot bricks were wrapped in paper and rags and stored on the floor boards of the cart as foot warmers.

The repairman drives hours through subzero weather, sometimes fighting a blinding blizzard to reach the affected area only to run into an even more difficult task—wading through waist-deep snow drifts to the pole line and then stabbing his way to the top for a test.

There the wind knifes through the best insulation in the way of clothing that man invented and chills the very marrow in the lineman's bones. His return to the rig offers him no comfort. The bricks have grown cold and the blankets that cover him from lap to feet seem inadequate. After hours of such punishment it was like heaven to get home, enjoy a hot bath, a hearty meal and an evening of rest.

When out on a junket, eating was a problem, especially during the winter months. There were no thermos bottles at that time and eating frozen sandwiches wasn't too enticing. Usually the man was too far from any town. A pokey team of horses offered no answer to noon-time meals. Most repairmen knew many of the farmers along the toll lead routes they patrolled. Often they would stop at a farm house in an emergency and wangle a hot meal.

The archetype of today's repairman was a rugged individual. He received his education in the school of hard knocks. Experience was his teacher. Trial and error was the order of the day. The beginner was greatly handicapped by those with whom he worked. If they were familiar with the work at hand they kept a close mouth. They feared to let the novice in on their secret knowledge because he might learn enough to take over their job—erroneous assumption, true, but still very prevalent in the early days of telephony.

It seems to me that somewhere there should be a "Hall of Fame" for repairmen, linemen and other telephone folks who, through sheer sacrifice, courage, endurance, industry and physical discomfort, have helped in making the telephone profession tops in industrial achievement.

Practically all telephone men are specialists today. Do you suppose that some day the linemen will disappear like the passenger pigeon? If that happens it will be a sad day—a very sad day, indeed.

REA Assigned Role in Rural Area Development

THE Rural Electrification Administration has been assigned a role of helping state and local groups promote industrial and commercial enterprises in the Department of Agriculture's Rural Area Development (RAD) program, according to announcement by Secretary of Agriculture Orville L. Freeman on June 16.

Secretary Freeman also announced other assignments and responsibilities within the department to carry out President Kennedy's directive to proceed at top speed on RAD. He also outlined how the program will operate in states and localities.

The Agriculture Department, in its RAD program, combines the existing services of the agencies within the Agriculture Department with the special features of the administration's new Area Redevelopment Act as it applies to farming and rural areas.

Secretary Freeman said the Area Redevelopment Act provisions affecting rural areas will become an important tool to aid the nation-wide program to operate more effectively in rural areas of greatest underemployment and low income.

The secretary established an Office of Rural Areas Development to coordinate all area development activities of the department. Turley Mace, presently serving as assistant to John A. Baker, director of agricultural credit, heads the newly created office, which will operate under the general policy guidance of the RAD board representing 11 Department of Agriculture agencies.

Secretary Freeman has recommended that state officials and selected nongovernment leaders form RAD committees to assure effective operation of the program. In some states this will mean creating a new committee; in others, reorganizing the present state rural development committee. State extension service directors have been asked to assist in this process, the secretary said.

State RAD committees will be responsible for coordinating services and other activities in support of rural development, helping organize local programs, and providing technical aid to localities.

All Department of Agriculture agencies will assist in state and local development programs. Secretary Freeman announced that RAD panels are being formed in each state by departmental field representatives. These panels, which will be chaired by Farmers Home Administration state directors, will provide technical aid and advice for state RAD committees.

In localities with organized RAD programs, the secretary recommended that civic, agricultural, and local government officials take the leadership of the work. Department of Agriculture field employes will also serve on these local groups, but as technical advisors only.

Secretary Freeman called on state RAD committees to help such local groups set up development programs as rapidly as feasible in appropriate economic areas.

In his June 16 announcement, Secretary Freeman said that a reorganized and expanded RAD program would also encourage more effective operation of the new Area Redevelopment Act in rural areas.

This act authorizes loans, grants, technical aid, and other benefits for "distressed" rural and urban areas. The Departments of Agriculture and Commerce are now working out procedures for naming eligible rural areas.

According to *Rural Lines*, REA publication, REA administrator Norman M. Clapp, in addressing a recent co-op RAD meeting in Washington, announced guidelines for the agency's participation with its borrowers in the RAD program. He said that REA will concentrate on working with borrowers to assist them in developing and carrying out programs for economic and community development. He stated that the initiative and decisions of local people will determine the extent of REA assistance, and that REA will cooperate with all other agencies—local, state, and federal—in carrying out rural development activities.

Mr. Clapp emphasized the availability of Section 5 loans to finance the purchase and installation of electrical machinery and equipment for industrial, commercial, and agricultural enterprises in rural areas.

Noting that REA borrowers are in a position to make a major contribution to the growth and development of rural areas, he recommended that, where legally and financially possible, borrowers take an active role in community development work.

He offered the following examples of borrower participation:

1. Assume leadership in surveying local problems, inventorying resources, and determining opportunities for improvement.
2. Assist with the establishment of local development corporations designed to stimulate and assist the establishment of new or expanded enterprises within the area. These enterprises may include both private and cooperative type organizations. Priority of attention should be given to assisting the type of industry which will most fully meet the needs of the local economy and which will not result in the moving of an enterprise from one location to another.
3. Make nominal general fund investments in local development corporations.
4. Participate with local groups concerned with the improvement or furnishing of needed community facilities.
5. Make loans under Section 5 to finance the purchase and installation of electrical machinery and equipment for industrial, commercial, and agricultural enterprises in rural areas.
6. Coordinate local development activities with statewide and other associations of borrowers, wherever practicable.
7. Make their facilities available for training or retraining of unemployed and underemployed people.

In an address before the Wisconsin Electric Cooperative Association in Madison, the administrator told delegates:

"Perhaps the greatest contribution we can make will be in stimulating new enterprise. It can be cooperative enterprise, strictly homegrown, based on local needs and geared to existing markets. The whole field of food and fiber processing offers opportunities for local and cooperative enterprise which can retain a larger share of the food dollar in our rural communities."

Soon after, according to *Rural Lines*, REA sent teams to several states in response to borrower requests to help them and their communities with area development work. These REA technicians are assisting local leaders to inventory their resources and to select those types of industry best suited to the local economy. Careful attention is being given to the creation of community development cooperatives, organized to tackle a wide variety of local problems.

EAS Links Canada, Minnesota

With the initiation of toll-free telephone calls between the northwestern Ontario community of Rainy River and the neighboring town of Baudette, Minnesota, extended area service has crossed international boundaries. The 1,300 subscribers in both communities previously paid tolls on their international calls.

Other Fellow's Shoes

"Other men's pains are easily borne."
—CERVANTES.

today's Highlights

of finance-taxes-business trends

by Willard F. Stanley

BOND PRICES RECEDE: The 30 days ended June 20 witnessed a slide in bond prices. The market had been awaiting the large, (250 million dollar) AT&T debenture offering, which came to market at a 4.68 per cent yield base. This yield contributed to a further lowering of prices, being somewhat below that commanded by similar securities awhile back. As this is being written the telephone offering is still "in syndicate" (i.e. not fully distributed), although it's said to have been fairly well sold.

Best indication of recent bond market trend is the Wall Street Journal tabulation of new issues, which shows, with respect to 14 new utility bond issues as of June 14, average yields, based on then current bid prices, 8 decimals (0.08 per cent per annum) higher than the average yields based on the original offering prices of these securities. This indicates a moderate lessening in value of utility bonds.

With increasing evidence of the termination of the recession, it now appears unlikely that the administration's efforts to hold down long-term interest rates will be graced with a high degree of success. The probable increase in demands for funds (indicated, for instance, by increase in estimate of capital expansion during the balance of this year) seems likely to prevent any considerable drop in bond yields from present levels in the near future.

However, it seems equally likely that any rise in funded debt money costs from present levels should not be of a material nature. Under these circumstances, utilities should pursue a conservative course in raising funded debt cash, going to market as the funds are needed along the lines of normal schedules of offering dates.

The market for utility equities still continues to hold at high levels, with average price earnings ratios at a new high in June, thus indicating the desirability of bringing to market common stock offerings without delay to cover forward requirements for a considerable period. With the phenomenally low money cost of substantially less than 5 per cent for common stock funds (before selling expense), utilities obviously can't go far wrong in taking advantage of this historically unprecedented favorable situation.

* * * *

STOCK MARKET SUBSIDES: After a 4 per cent rise in the 30 days ended May 26 (according to the New York Times 50 combined stock average), the stock market registered a slide in the succeeding period ended June 23. After its May rise,

Mr. Stanley, formerly a utility financial executive, is now president of Corporate Services, Inc. of New York City and is well known as a financial writer. He is a member of the Controllers Institute of America and the New York Society of Security Analysts. He serves on the Finance Management Committee and the Tax Committee of the Controllers Institute (N. Y. Control). His articles are appearing once a month in TELEPHONY.

the market recorded a high for the movement early in June and then started a more or less steady retrograde movement that brought it at June 23 to a point about one per cent below the close on May 26. At this level the average was 11 per cent ahead of the close of last year; 5 per cent below the close of 1959; and 5 per cent above the end of 1958.

The Kennedy-Khrushchev summit meeting didn't seem to affect the market much. Continued favorable statistics on the ending of the recession were a favorable factor in recent weeks, although earnings reports continued spotty and store sales registered a decline for the latest announced monthly period. The release of the May figures on industrial production were highly heartening, adding a 3 per cent increase over May, 1960, to the 2.5 per cent increase registered in April over that month of the prior year. This totals a recovery of most of the ground lost in the recession with respect to this item. New orders and shipments also moved forward.

All this should have stimulated the stock market, but the reaction of the past few weeks probably reflects an "overbought" condition, plus, perhaps, increasingly greater recognition of the extremely high price earnings levels at which many stocks, including utilities, are now selling.

Standard and Poor's recently stated that average price earnings ratio for all industrials was 22.7 times (equivalent to a return to the investor of only about 4.4 per cent). The latter figure is not the dividend yield, which is much lower, but the total return on investment, including retained earnings.

The saying that stocks were "discounting the hereafter" was heard first during the 1929 boom days, but it seems equally applicable today in the light of these current price earnings levels. This exceptionally strong and continuing stock market trend is undoubtedly due to factors quite apart from normal methods of evaluating stocks, principal of which is probably the persistent monthly demand of pension funds for common stocks, both of the "growth" and investment variety.

These demands did not exist a decade ago to any material degree. The larger number of pension plans, and the increasing realization that the plans should protect against future inflation, has led to investment of a substantial part of current payments into the plans in common stocks. This is a continuous factor and will undoubtedly act as a permanent benefit to stock prices. It will be many, many years before the outgoing payments under these pension plans come anywhere near the payments being received by the plans from current contributions.

Of nearly 30 billion dollars held by pension trusts, about a third is now in common stock, and the proportion of their intake currently so invested is considerably larger.

* * * *

TAXATION: The President's tax proposals continue to meet heavy going from nearly all sides. Assistant Secretary of the Treasury Surrey, who is considered as having had a considerable part in shaping the tax proposals, expressed himself as "puzzled" over the unfavorable reaction to the tax credit provision.

The writer is inclined to agree with him. Apart from its flagrant inequity in excluding utilities from the benefits of the credits, the proposal seems about as basically sound and simple as any which might be designed to stimulate expansion by granting tax benefits therefor.

Some of the arguments raised against the proposal are inconsistent and absurd. There are those, for example, who say the stimulation should have been supplied through more liberal depreciation allowances and in the same breath object that the credit will aid only business with capital investments and capital expansion. This, of course, is true, but it would be equally true of higher depreciation, which they acclaim as the answer to all their woes.

Possibly of most importance to the telephone industry is the sad, although hardly unexpected, news that the telephone excise tax seems almost sure to be continued for another year, together with other excise taxes and the higher corporate tax rates. It will probably prove difficult to eliminate or adjust any of these items short of a complete overhauling of the entire tax set-up, which, incidentally, has been promised for next year, but may not actually be adopted until much later.

The Plant Man's NOTEBOOK

By RAY BLAIN, Technical Editorial Director

ABOUT 60 PER CENT of all paper-insulated cable in the Southern Bell Telephone & Telegraph Co. territory is now under pressure. Moreover, about 90 per cent of all underground cable is pressurized.

The first district in this company to fully pressurize its cable completed the work in December, 1960. The district had the best performance record in 1960, with an average of 27.55 service-affecting troubles per 100 sheath miles of cable. The company's average was 77.32 troubles per 100 miles.

The completely pressurized district's average for the first three months of 1961 was 4.08 service-affecting aerial cable troubles per 100 miles.

•

We have a letter from C. J. Keith, director of Telephone & Associated Services, Ltd., Donington House, Norfolk St., London, W.C. 2, England, in which he states that they have experienced trouble from borer beetles attacking lead-covered cable in two of their associated companies in Portugal and Jamaica.

Mr. Keith has noted several items in recent issues of TELEPHONY that borer beetles have attacked both lead and polyethylene cables in this country. He would appreciate hearing from companies that have experienced this trouble so that they can exchange notes on the problem.

•

We have just received a copy of the *American Preview of Overseas Projects*, a weekly publication that specializes in supplying early leads on new projects in Latin America, and other growing areas, which might otherwise escape the attention of American companies.

Only industrial and construction projects that would likely require American machinery, equipment or services are described. This is a weekly report published in Washington, D. C.

•

There are some peculiar combinations these days, and among the most unusual are the transistor radio sunglasses.

Contained within the frame of this unique-type of sunglasses is a three-transistor radio. Included in the set is a plug-in antenna for use in moving vehicles. The radio is powered by a dime-sized mercury battery.

Replacement batteries cost 35 cents each, and will power the set for 150 hours.

•

A new soft cover book of 96 pages titled, "Filters and Attenuators," edited by Alexander Schure, will be of special interest to all communicators.

This book makes filters and attenuators, their functions, the wide variety of types, circuitry, and applications understandable. Both narrative and mathematical presentations are used.

The characteristics of a capacitor-input type filter in power supplies are analyzed, together with power supply problems and solutions.

Audio and video filters, wave filters, and specialized filter types are covered thoroughly, a chapter being devoted to each. The text embraces fixed and variable attenuators and equalizers.

Numerical examples and solutions help make the mathematical presentations clear. The calculations include the determination of component parts values.

This book may be obtained from TELEPHONY for $2.25.

•

We are in receipt of a letter from George Hamburger, manager of sales for Copperweld Steel Co., in which he makes the following comment with reference to our recent article titled, "The Power Contact Hazard" (TELEPHONY, Apr. 22, 1961):

"I thought it might be of interest to you to know that in our many contacts throughout the communications and power field regarding grounding problems, we have found an increasing lack of good grounding with water pipe connections due to increased use of non-metallic pipes such as transite, etc. Therefore, it seems to be more and more important to test each ground by the use of a 'Megger' to be sure, and also to increase the use of deep grounding for more positive and permanent grounds.

"If any telephone company having grounding problems will let our people know, we have 'Meggers' available and will be glad to check their grounds for them, by predetermined appointment, of course."

This is a marvelous opportunity for any company that may doubt the reliability of its protector grounds.

•

A U. S. Census Bureau survey of population density shows that New York, the nation's largest city, is also the most crowded, with 24,697 people per square mile. Next are Chicago and Philadelphia, each with nearly 16,000 persons per square mile. In area, Los Angeles ranks first, with 454.8 square miles. Next is Houston, followed by Oklahoma City, New York, and Hilo, Hawaii.

"Cross Talk"

It has been suggested that only seasoned missionaries be sent to cannibal countries.

•

It is far better to sit tight than to try to drive that way.

•

It is said, our enemies are our friends whom we have never made an effort to understand.

Progress Under Regulation

Cited at Missouri-Kansas Meet

By R. C. RENO

"THE EXTENT and character of utility regulation in a particular jurisdiction depends upon the breadth of the statutory authority conferred, and the quality of the personnel who make up the regulatory body. A most important component of quality is morality—the honesty and integrity of commissions and commission staffs which insures objective, fair and impartial treatment of all matters which may come to the commission's official attention."

This was the view expressed by a state regulatory commissioner, Richard C. Byrd, chairman of the Kansas Corporation Commission, at the annual joint convention of the Missouri Telephone Association and Kansas Telephone Association, held May 22 and 23 in Kansas City, Mo.

In an address on "A Regulator's View of Regulation," Commissioner Byrd pointed to recent investigations at the federal regulation level which have highlighted instances of apparent partiality on the part of commissions. Observing that public attention has been called to ex-parte conferences between commission personnel and representatives of industry, which he said, the investigators regard as a particular evil, the commissioner had this to say about morality in regulation:

"There have been suggestions that legislation should be adopted to guarantee that all cases will be fairly considered. But morality cannot be pumped into regulatory personnel by law. The best method of insuring morality of regulatory commissions is to seek out men of good moral character for appointment to those commissions. This is not infallible, but it is better than trying to legislate morality into men not so carefully selected. No harm comes to anyone from an ex-parte conference with a commissioner of good moral character, who is otherwise qualified by experience and intelligence to perform his duties. Such conferences often serve to further the public interest."

Chairman Byrd said he was certain that, today, the public is better acquainted with and has a better understanding of the duties and responsibilities of regulatory commissions than in the past. On this point he observed:

"A great number of cases involving utility rates and other problems have been presented in the 15 years since World War II. By and large they have been well publicized. As a result the public has come to have a much clearer knowledge and understanding of the regulatory function. It is my own observation that the people affected by a utility proceeding before the commission take a much more objective view of it than most utility managers believe they do. This may be, and I hope it is, a result of public recognition that utility regulatory laws, for the most part, are properly designed to promote as well as protect the public interest and that, in the great majority of jurisdictions, those laws are fairly administered."

Commissioner Byrd discussed some of the problems facing commissions and on one problem, "regulatory lag," which term is commonly applied to the interval between the time a petition for increased utility rates is filed and when they are approved. On this point the commissioner stated:

"Perhaps the most unfortunate aspect of regulation, and a subject of justifiable criticism by utility management,

Officers and directors of the Missouri Telephone Association. Seated, left to right, John W. Slemmons, secretary; Jack E. Bartruff, president; Miss Elizabeth Journey; Miss Katharine Bauer, assistant secretary-treasurer; C. W. Chastain; Foster B. McHenry. Standing, left to right: P. A. Browne, J. C. Kreamer, E. J. Ernest, Cliff Davis, R. E. Williams, Walter Mitchell, O. C. Agne and Joe M. Roberts. J. L. VanHorn, new vice president and director, W. R. Trowbridge and Fred B. Hunt, directors, are not pictured.

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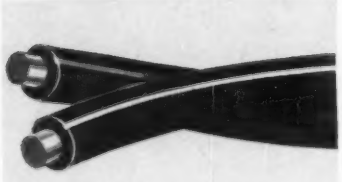

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is what all of us commonly call the 'regulatory lag.' Authorization to collect increases in revenues often tardily trails the need for those increases. Whatever is lost by regulation's failure, or inability to keep authorizations abreast of needs, is often unrecoverable. The problems that 'lag' presents cannot be accepted as beyond solution. They are challenges which should be accepted as such. Regulators and utility managers alike must devote study and thought—and imagination—to the solution of this problem. We are making headway in Kansas as most of you have learned through observation or your own recent experiences. We want to do even better. We know you want us to do better."

In closing, Commissioner Byrd said:

"Regulation of the telephone industry in Kansas has not stifled it or prevented its growth. There were 575,967 telephones in Kansas in 1950. At the end of 1960, the number was 883,178, a gain of more than 53 per cent. The Kansas commission does not pretend that it brought this growth about. We know that increased population, increased recognition of the telephone as a household and business necessity, improvements in the art, and your own ingenuity and desire to serve public needs, are deserving of that credit. We are pleased, however, that our regulatory procedures and policies have encouraged and complemented this remarkable development. Certainly it must be recognized that we have worked with you in the public interest and in doing so we have together provided an example of regulation in the role of an aid to progress."

Regulation was also the subject of an address by Paul H. Henson of Kansas City, Mo., who is executive vice president of United Utilities, Inc. He spoke on the subject, "Progress Under Regulation." After reviewing the history of utility regulation on local, state, and federal levels, Mr. Henson said that much progress has been made since the inception of state regulation.

On the service side of the picture, he said, it is obvious that communications are vastly more convenient and utilitarian—of infinitely better quality and of more universal scope. On the cost side, telephone rates have increased little more than one-half of the total rise in average consumer prices since 1940. This speaks well for the industry and regulatory bodies, Mr. Henson stated. He continued:

"The fact that telephone rates have not risen as rapidly as all consumer products is explainable. The high degree of mechanization that has been introduced into the telephone industry since 1940 is certainly one of the significant factors. The acceptance and usage of telephone service, particularly toll service, has been another salient factor. New product development and aggressive marketing techniques have, of course, served to stimulate customer acceptance. At least one more factor must be mentioned. Telephone rates will never rise in keeping with consumer products as long as industry earnings are not comparable to earnings of non-regulated industries.

"However, we have progressed in this area, too. There is growing recognition on the part of many state regulatory bodies of our problems—operational, as well as financial. The telephone industry is not any more exempt from the effects of inflation than is any other industry. Neither is the telephone industry exempt from the rising costs of capital. We have progressed in gaining recognition of these facts in rate base determinations, rate of return allowances and depreciation schedules. We still have work to do. We will always have work to do so long as inflation continues."

New officers of the Kansas Telephone Association. Left to right: David J. McKay, vice president; George A. Hearne, president; J. S. Hopkins, treasurer, and Douglas Gleason, secretary.

In regard to federal regulation in the telephone industry, Mr. Henson said it is difficult to cite the specific progress that the industry has made under FCC regulation. He observed further:

"Much of the industry's progress has been made under regulation that emanated jointly from state commissions and the FCC. Recalling interstate toll rate reductions and the buffeting that the industry has taken on radio frequency allocations, one can hardly conclude that the industry has done as well under FCC regulation as it has under state regulation."

However, Mr. Henson said that "certainly, progress has been registered under the scheme of coordinate regulation—the industry has progressed and the quality and capacity of regulation has improved."

Under this form of regulation, and with free enterprise motivation, a communications system that stands head and shoulders above anything else known in the world has been built. He continued:

"Much of this progress has been made in spite of regulation and control, rather than because of it. There is ever-increasing control emanating from Washington that tells us, among other things, how to hire, how to promote, what to pay, what to withhold, what to collect in taxes, what to pay in taxes, how to finance, how to expand and how to operate. Such controls, together with the rapidly increasing influence of labor, have served to materially reduce management prerogative during the pe-

(Continued on page 34)

Pioneers Hold Meeting

One of the features of the joint convention of the Missouri and Kansas telephone associations was the luncheon of the Theodore Gary Chapter of the Independent Telephone Pioneer Association. The luncheon opened the convention and following an address by Frank Lane, general manager of the Kansas City Athletics, American League baseball team, chapter officers and directors were elected.

Officers named are: President, Jack E. Bartruff of St. James, Mo.; vice president, Miss Kathryn Journey of Higginsville, Mo.; secretary-treasurer, Katharine A. Bauer of Jefferson City, Mo.

Directors elected are: Harold C. Stouffer of Diamond, Mo.; J. W. Slemmons of Jefferson City, Mo.; R. J. Fegan of Junction City, Kan.; Jack Shriner of Kansas City, Kan. and Rolley L. King of Caldwell, Kan.

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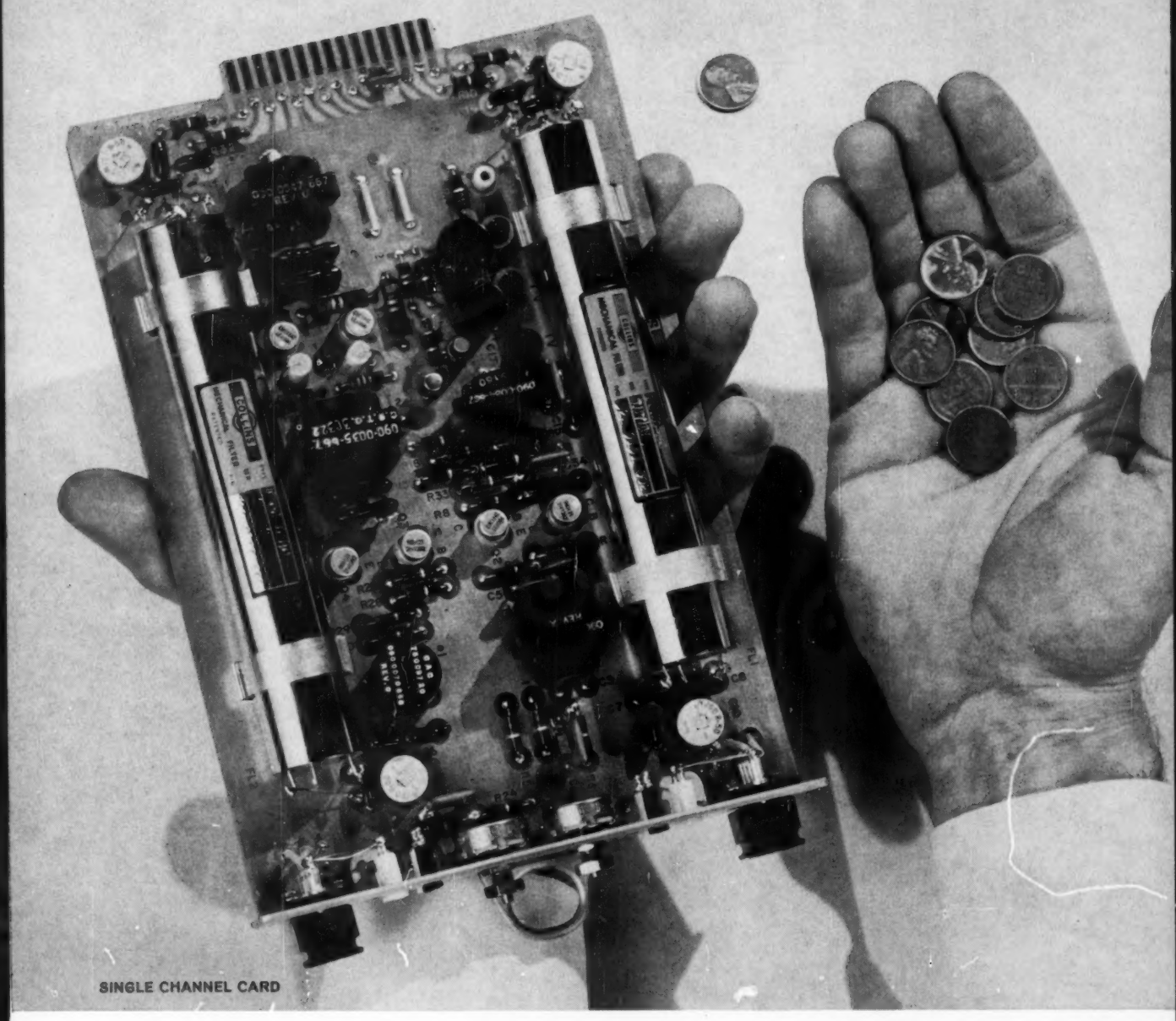

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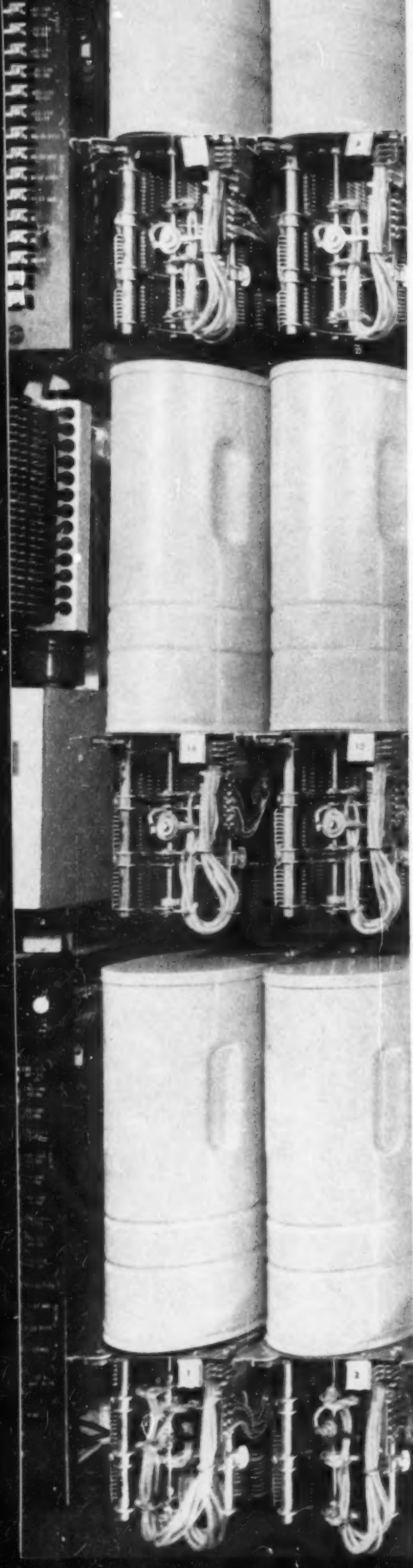

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Speakers at the Missouri-Kansas convention. Above, left to right, C. C. Pearce, president of the United States Independent Telephone Association; P. H. Henson, executive vice president of United Utilities, Inc.; Richard C. Byrd, chairman of Kansas Corporation Commission. Right: R. A. Dell, REA deputy administrator.

riod of the industry's greatest progress.

"Past progress should be indicative of future capability. But is it? If the form and extent of classic regulation remains stable and further recognition is given to the need for regulated industries to earn in reasonable relationship with progressive companies in the nonregulated field, there is every reason to believe that the telephone industry could progress further in the decade of the sixties than it did in the fifties. However, we must first have the opportunity to prove ourselves without controls and regulations that render progress impossible."

Clifford C. Pearce of Riceville, Ia., president of the United States Independent Telephone Association, told the convention that it is becoming more and more important for each Independent company to be active in its state and national organization.

"We are helpless as individuals" and "must work in close harmony to cope with the complex problems that face us," he said. "Each of us operates a segment of a highly complicated communications machine, and we must see to it that this cooperation continues and improves if we are to provide the best possible service to our customers."

The largest opportunities for the telephone industry in communications lie ahead, Mr. Pearce said. He warned of other industries which in recent decades have been faced with challenges but failed. In each case where competition took business away, he said, it was because of a failure in management, which refused to reorient and reorganize for the challenge.

"We can and will meet the competition," President Pearce said.

Richard A. Dell of Washington, D. C., deputy administrator of the Rural Electrification Administration, addressed the convention on the subject "REA's Objectives."

The primary purpose of REA, Mr. Dell said, is to provide telephone service in rural areas, and to carry out this purpose REA insists that its borrowers, so far as possible, provide area-wide service, which he said, "is a must on REA's part." He continued:

"In the drive to achieve maximum area coverage, we have come into the critical stage. It was relatively easy to extend service around the edges of the towns and along the highways. To get the rest of America on the telephone line with us is not going to be easy. But I think that the telephone industry has the vigor, the experience, and the imagination to furnish modern telephone service in thinly settled territories —and still operate in the black.

"No one expects an investor-owned business to consciously go into a nonprofit operation. On the other hand, there will always be room in our American economy for those community membership enterprises set up by people who want to serve their own needs at the actual cost of doing business. It is recognized that in the more difficult and marginal areas the co-op organization is the only way area coverage will be achieved. However the commercial companies have the obligation and they should have the opportunity to serve the rural people in their operating territories."

Another objective of REA is to perfect an equity policy on loans, in the hope that it can make loans easier for telephone organizations wholly owned within the local community. On this point, he said:

"For some time criticisms have been voiced about unfair equity treatment, about too large a percentage of loan funds expended in some places on nonrural plant, about speculative practices of certain promoters, about appraisals of property for acquisition. We have an inquiry under way to determine the validity of these complaints and to take

(Continued on page 55)

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Courts and Commissions

Order in Kentucky General, Bell Toll Case Issued

The Kentucky Public Service Commission, on June 2, issued its order in a case in which General Telephone Co. of Kentucky filed a complaint against Southern Bell Telephone & Telegraph Co. pertaining to the division of revenues from toll service furnished jointly by General and Southern Bell.

The major point of issue in the case was what methods should be adopted in determining the portion of the General company's over-all plant and expenses that should be allocated to message toll service—in other words, to determine the amount of General's plant and costs that are devoted to local exchange service and the amount that is devoted to toll service.

The General company's complaint stated that it participates with Southern Bell in providing the necessary facilities for interchanged toll business, but the rates for the interchanged business are established by Southern Bell's costs, which are determined for rate-making purposes by application of the so-called "Charleston" plan and the "Modified Phoenix" plan for separation of telephone plant and costs as to local service and toll service. General held that these formulas should be applied in dividing toll revenues.

These plans are the result of long and various studies made by federal and state regulatory commissions and the industry and are included in the "1957 Separations Manual" of the National Association of Railroad and Utility Commissioners.

The "Charleston" plan covers the apportionment of "exchange circuit plant" jointly used in rendering both local exchange and message toll service. The "Modified Phoenix" plan pertains to the apportionment of "interexchange circuit plant" in rendering both intrastate and interstate message toll service.

The "Charleston" plan calls for the "minutes-of-use" concept in the apportionment of "exchange circuit plant" to toll service, while the "Modified Phoenix" plan provides for the blending of the costs of AT&T Long Lines' and Associated Bell companies' interexchange plant within a specific state, and apportioning the plant on a "conversation minute miles" basis.

General asked the Kentucky Commission to approve plans similar to the "Charleston" and the "Modified Phoenix" plans for use in apportioning its exchange circuit plant and interexchange toll plant in connection with toll service furnished jointly with Southern Bell. The plans proposed by General are included in the Separation Manual of the United States Independent Telephone Association.

The commission rejected General's plea, holding that the application of both the "Charleston" and "Modified Phoenix" plans "would produce inequitable results in the separation studies underlying intrastate toll settlements."

Regarding the "Charleston" plan, the commission stated:

"Under the Charleston plan which is more universally used for jurisdictional purposes . . . the assumption is that in originating or terminating a long distance call, as much exchange circuit plant is used as is used in both originating and terminating a local exchange call. This assumption may or may not be accurate when applied on a nationwide basis where many large multi-office exchanges are involved, but whether accurate or not, it might properly be applied for jurisdictional purposes if uniformly accepted and only a single ownership is involved.

"In the instant case, we have more than one ownership involved and the accuracy of the assumption becomes of prime importance."

In rejecting the use of the "Modified Phoenix" plan, the commission held:

"The record shows . . . that the actual cost per circuit mile of General's toll facilities in Kentucky is $208 and that this is the level of cost for General's toll facilities actually devoted to the interchanged business. Under its proposed procedure General would add together the cost of its own toll facilities and the cost of the Bell System (Southern Bell and Long Lines) toll facilities in Kentucky and dividing by the combined mileage obtain an average cost of $140 per circuit mile for the combined General and Bell System toll facilities in Kentucky.

"Further application of General's adaption of the 'Modified Phoenix' plan would result in increasing General's cost per circuit mile assigned to the interchanged traffic from $208 to $236 and reducing General's own (non-Bell) circuit cost from $208 to $140 per circuit mile. . . .

"Herein General seeks to have the commission require Southern Bell to provide it a return out of the revenues from interchanged business for $28 more investment per mile than General's actual plant cost. . . .

"This extra compensation for General can only come out of the pocket of its partner in the joint undertaking in this case, Southern Bell. Since (until proved otherwise) the joint rates produce no more than a fair return for the combined properties devoted to the interchanged traffic the effect here is to simply take $28 per circuit mile from the owners of the Bell System and turn it over to the owners of General. . . .

"However, irrespective of the arguments supporting the use of a formula which produces such a result, the commission cannot in good conscience . . . confiscate the properties of one group of investors for the benefit of another group or put the cost of one subscriber group's service on a totally separate group of subscribers."

The Kentucky commission went along with General in finding that digit absorbing equipment installed by General should be assigned to toll service, as provided for in the USITA Separations Manual.

Digit absorbing equipment is used to absorb the first two or three digits dialed on local calls to implement the 2-5 numbering system used in direct distance and operator toll dialing.

General contended that since the equipment is provided because of toll service, its cost should be borne by toll, irrespective of the fact that its use is entirely for exchange service.

Southern Bell contended that the initial assignment of digit absorbing equipment should be to local service with only a portion thereof being ultimately transferred to toll.

The Kentucky commission, while agreeing that Southern Bell's position is consistent with the "use" principle, stated that, in some instances, the participating company or exchange "may be required to provide digit absorbing equipment, but with little benefit to its subscribers and only nominal compensation to itself; and thus inequities would result from a strict use principle. . . ."

On this basis, the commission ruled

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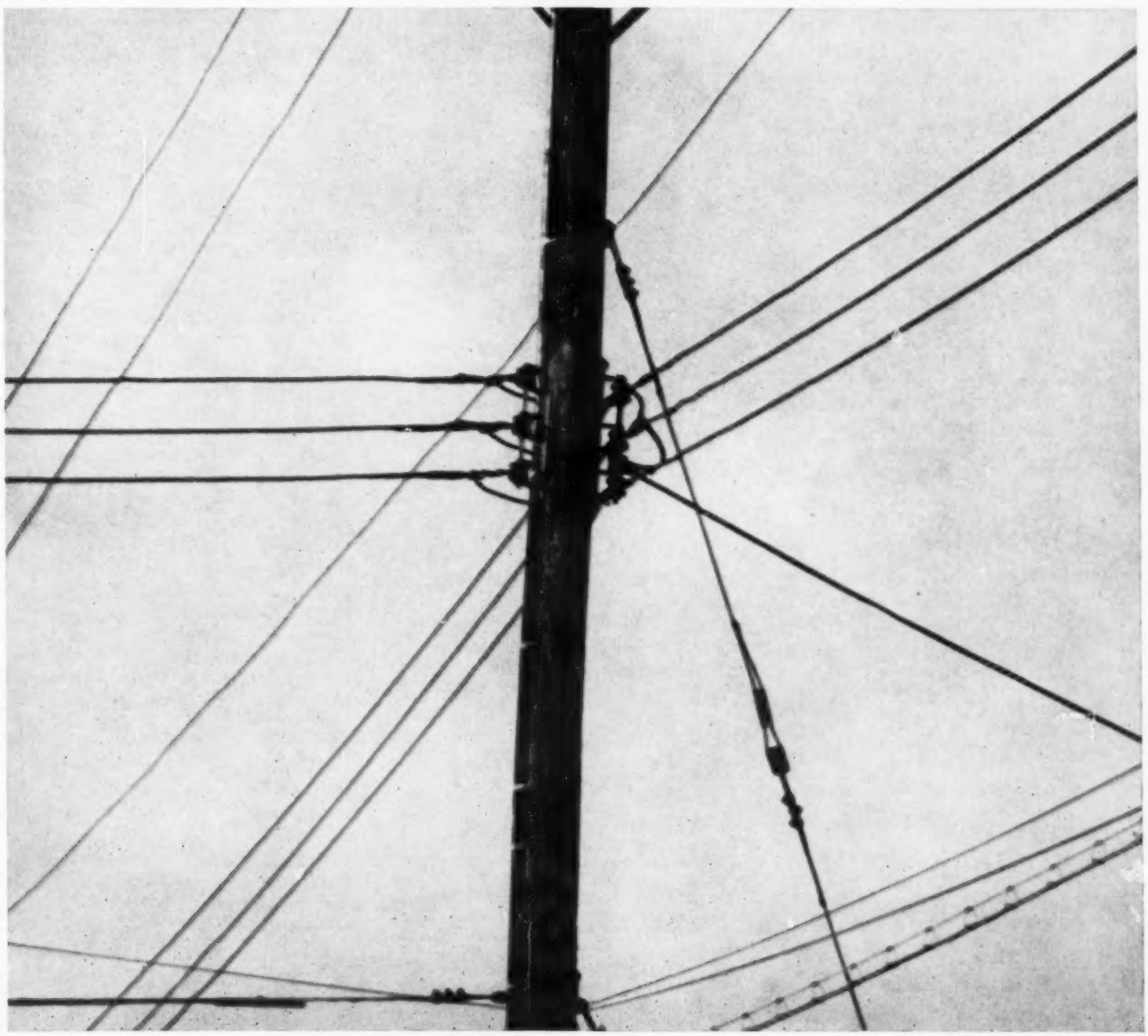

in favor of General's position and approved the initial assignment of digit absorbing equipment to toll service.

The Kentucky commission's order was the first of two in four cases involving separations procedures between General and Bell companies. On June 9, the Ohio Public Utilities Commission issued the second order in the case of General Telephone Co. of Ohio *vs* Ohio Bell Telephone Co. Similar commission cases involving General Telephone Co. of Florida and Southern Bell Telephone & Telegraph Co.; and West Coast Telephone Co. and General Telephone Co. of the Northwest and Pacific Telephone & Telegraph Co. (in Washington State) are pending.

The Ohio commission, in contrast to the Kentucky commission, upheld General of Ohio in approving the use of the "Minutes-of-use" concept in apportioning General's exchange circuit plant to jointly furnished intrastate toll service. However, like the Kentucky commission, the Ohio commission rejected the application of the "Modified Phoenix" plan in the apportionment of General's interexchange circuit plant for toll (TELEPHONY, June 17, p. 40).

The Ohio commission also ruled in favor of General in finding that digit absorbing equipment installed by General of Ohio should be assigned to toll service rather than to local service.

On June 21, General Telephone Co. of Kentucky filed an application for a rehearing of the Kentucky case. It sets forth points on which consideration is sought and seeks to establish the use of procedures contained in the USITA Separations Manual in providing a method of establishing the level of settlements for message toll traffic interchanged between General and Southern Bell.

GT&E Asks FCC for Space Communications Frequencies

General Telephone & Electronics Corp. on June 23 recommended to the Federal Communications Commission that provision be made for allocation of a frequency band for an experimental worldwide space communications system, utilizing satellites orbiting 22,300 miles above the earth.

Pointing out that the commission has stressed the necessity for "a truly global communications system," the company reiterated its previous recommendations that a high-altitude system be adopted to meet that objective. GT&E stated that the high-altitude system it advocates "is the only system proposed to date that can economically fulfill the requirements of global satellite communications."

The high-altitude system would utilize several satellites placed above the equator, the company explained. Each satellite would be at an altitude of 22,300 miles and would orbit at the same angular velocity and in the same direction as the earth's rotation. Thus the satellites would be "stationary" in that they would remain over the same point on the earth's surface. Ground stations would transmit telephone, data, or television signals to the satellites which would in turn relay the signals to appropriate ground stations located throughout the world. At least 20 stations would be required for world-wide coverage, the company said.

Allocation of a frequency band would expedite establishment of an experimental 24-hour satellite by 1963, according to GT&E. Specifically, the company recommended that an experimental frequency band of 10-megacycle bandwidth be allocated below 2000 megacycles.

The company cited the following features of its proposed high-altitude system:

(1) Each ground station would be able to communicate with any or all other ground stations at any one time.
(2) Ground station investment would be minimized since each station would require only that equipment sufficient for its traffic demands, a feature deemed to be especially significant to the economically less-developed countries.
(3) Channels would be assigned and services billed on a demand basis, thus automatically adjusting to changes in traffic density over the 24-hour period due to dispersion of communications centers over the various time zones.
(4) Any unoccupied voice channel in the system would be available for use between any two ground stations.

As far as timing is concerned, the GT&E petition stated that an operational high-altitude system, with random access to the system as needed by the various ground stations, "can be achieved as soon as or before a fully operational point-to-point random orbit system of even limited geographical coverage." The latter would be a low-altitude system using 40 or more satellites launched into random orbits passing over the poles at an altitude of about 3,000 miles. Their direction of travel would be perpendicular to the direction of the earth's rotation, and thus they would be constantly in motion in relation to the earth, in contrast to the high-altitude satellites which would be "stationary."

A joint USITA-Bell Engineering Committee conference was held in New York City on June 7 and 8. Among subjects discussed were TELPAK service, air-ground radio-telephone service, WATS, educational television, MTWX, PBX in and out dialing, Data-Phone service, standardization of codes, person-to-person DDD calls, NPA information bureaus and blue book revisions. Shown in attendance are clockwise, A. A. Wilson of Mattoon, Ill.; J. C. Erwin of Bell Telephone Laboratories; A. C. Ocker and R. M. Gryb of AT&T; R. K. Ghormley of Lincoln, Neb.; Z. E. Barnes and J. P. Ringland (standing) of AT&T; Frank Barnes of Rock Hill, S. C.; Fred Roth of AT&T; W. Pitbladdo of Rochester, N. Y.; W. C. Farrell and R. W. Ralston of AT&T; I. B. Jackson of New York City; F. L. Kahn of Chicago, Ill. and R. J. Loveland of San Francisco, Cal.

Business Directory Publisher Convicted of Mail Fraud

Because his solicitation literature and bills too closely resembled those of the Illinois Bell Telephone Co.'s classified directory, Stanley Oleck on May 16 was found guilty of mail fraud and on June 21 was fined $3,000 and placed on a year's probation. Judge Edwin A. Robson in Federal District Court in Chicago also imposed a two-year prison term, then suspended it.

Oleck, president of Directory Publish-

ing Co. of Chicago, publishers of the Greater Chicago Business Classified Directory, was ordered to stop using order forms for advertisements in his directory similar to those used by Illinois Bell.

In August 1958, Federal Judge Joseph Sam Perry had refused to grant an injunction to block a federal investigation of Oleck's directory (TELEPHONY, Sept. 6, 1958).

Oleck, a New Yorker, was then indicted on 19 counts of mail fraud on Oct. 17, 1958 by a federal grand jury (TELEPHONY, Nov. 1, 1958). At that time the prosecution submitted evidence showing that of 150 persons who sent money to Oleck's Chicago office, all 150 thought they were paying for Illinois Bell Telephone Co.'s "Red Book" advertising.

Assistant United States Attorney Daniel A. Becco reported that Oleck had been found guilty of 15 counts of the 19-count indictment. Oleck was fined $200 per count, for a total of $3,000, and ordered to pay the court costs.

Deny Switching Company's Plea to Sell in Minn.

The Minnesota Railroad & Warehouse Commission on June 19 denied the joint application of the Havelock Telephone Co., Maynard, to sell and the Clara City Telephone Exchange Co. to purchase Havelock's property.

The Havelock company is a switching company operating a rural distribution system serving 117 subscribers, with local and toll service provided by the Citizens Telephone Exchange Co. of Maynard. The Citizens company has furnished Havelock these services since 1914.

The Citizens company had protested the sale of the Havelock company to the Clara City company for $1.00 (which had been agreed upon by a 70 to 23 vote of the Havelock stockholders) and asked to purchase the company for a price of $7,500.

The commission majority opinion said that Havelock subscribers could call Clara City toll-free, while being served by the Maynard exchange, through the establishment of extended area service. They said that "if such a wholesale transfer of switchers from one exchange area to another were permitted, precedent would be set which would result in considerable "raiding of each other's territory by the telephone companies."

Paul A. Rasmussen, commission chairman, dissented, stating that the switchers do most of their business at Clara City and to deny the two companies

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(Havelock and Clara City) the right to negotiate this sale is "nothing short of an infringement upon property rights."

Initiate EAS, Two Georgia Companies Get Raises

The Georgia Public Service Commission on June 15 approved rate increases for both the Broxton Telephone Co. and the Douglas Telephone Co. in connection with two-way extended area service between the Broxton and Douglas exchanges.

Rates sought by both companies and those approved by the commission are as follows:

	Proposed	*Approved*
One-party business ..	$7.75	$7.00
Two-party business ..	6.50	6.00
Four-party business..	5.50	5.00
Multi-party rural business (0-2 miles)	5.00	4.25
One-party residence..	5.00	4.25
Two-party residence..	4.25	3.50
Four-party residence.	3.75	3.00
Multi-party rural residence (0 to 2 miles)	4.00	3.25

In the case of the Broxton company, the rates proposed by the company would have given it a 4.26 per cent return on its rate base of $50,735.39.

Net operating revenues would have increased to $2,160.87 from $514.93. However, the commission stated that according to its staff audit report, accounting records are not maintained by the Broxton company in accordance with the uniform system of accounts prescribed by the commission. Therefore, the commission stated that "when proper books and accounts are not maintained, the evidence presented in a financial proceeding is usually not conclusive. Such seems to be the case in this instance."

As for the Douglas company, the rates proposed would have given it net operating revenues of $45,663, allowing it a 6.9 per cent return on its rate base of $661,571.

However, the commission reduced the valuation of the rate base to $634,264. Therefore, it said net operating revenues of $43,822 would give the Douglas company a 6.9 per cent return.

Approve Loan in Georgia

The Georgia Public Service Commission on June 15 approved the application of the Hart County Telephone Co., Hartwell, to borrow $37,000 from the Stromberg-Carlson Credit Corp. The money is to be used to install a dial switchboard addition to serve some 100 new subscribers.

Authorize Sale in Illinois

The Illinois Commerce Commission on June 23 authorized the Viola Telephone Co. to sell to the Viola Home Telephone Co. (TELEPHONY, Apr. 29). The Viola Telephone Co., the seller, is a mutual concern, and is incorporating as a public utility under jurisdiction of the commission.

Texas Court Won't Enjoin City in General of SW Case

The Texas Supreme Court, it was reported recently, refused to order the Fourth Texas Court of Civil Appeals at San Antonio to enjoin the city of Weslaco from enforcing an ordinance establishing maximum rates and affecting General Telephone Co. of the Southwest, San Angelo (TELEPHONY, Mar. 25). [*Editor's Note:* Texas does not have a state commission regulating telephone rates.]

In the rate case, which is now in its second year of litigation, Judge W. R. Blalock of the 93rd Texas District Court on Dec. 22, 1960, granted the company a permanent injunction against enforcement of the law, stating the ordinance violates due process of the U. S. Constitution. Weslaco appealed the injunction to the court of civil appeals.

In a petition before that court on Feb. 23, the company requested authority to put a rate increase in effect in the city while the rate order was being appealed. The civil appeals court denied the company's petition.

Also, in its ruling, the supreme court rejected the company's request to order the civil appeals court to forbid enforcement of the ordinance during the appeal.

Authorize EAS, Increase, Loan; Permit Cease in Kan.

The Kansas Corporation Commission has authorized United Telephone Co. of Kansas Inc., Abilene, to provide extended area service between Troy and Highland, Wathena and Bendena, this service to go into effect at a slightly higher rate when the exchanges are converted to dial service in September. Lloyd Shank, commission chief engineer, said customers in Troy can dial those in the three other towns direct, and the others can dial Troy subscribers direct.

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The commission also authorized Totah Telephone Co., Ochelata, Okla., to serve exchanges at Elgin, Liberty and Hewins in southeastern Kansas. Elgin Telephone Co., Liberty Telephone Co., and Hewins Telephone Co. were permitted to cease business.

The commission approved a $450,000 REA loan to the Oklahoma company to rehabilitate these exchanges.

Wis. Companies Dispute Area, Ask Commission Aid

The Wisconsin Public Service Commission on June 16 was asked by representatives of the Lakefield Telephone Co., Newtonburg, and of Valders Telephone Co. to settle a boundary dispute between the two companies.

Valders engaged an engineer to explain that a firm boundary line is necessary between the areas of the two companies because of plans for direct tie-ins with Lakefield's Newton exchange and the Manitowoc exchange of the Wisconsin Telephone Co.

Certain telephone users in the Valders area had asked for service from the Lakefield company, giving added cause for the hearing.

Wisconsin Telephone Co. was not represented at this hearing. It was stated by attorneys that briefs will be filed by both companies, and the case given further study by the commission.

Authorize Neb. Sale, Approve Dial Rates

The Wood Lake Telephone Co. was authorized on May 31 by the Nebraska Railway Commission to sell its properties to V. L. Bradley of Menno, S. D. Mr. Bradley agreed to rehabilitate the exchange and convert it to dial operation. It serves 114 company-owned and 34 switching stations. The following gross rates were approved, subject to 50 cents prompt payment discount, effective with the dial conversion:

One-party business	$7.50
Two-party business	6.50
One-party residence	5.50
Two-party residence	5.00
Rural residence	6.50
Switching service	2.50

Color telephones will be installed for $5.00 over the regular installation charge.

General of Southeast Asks Rate Increase in Virginia

The General Telephone Co. of the Southeast, Durham, N. C., on May 26, filed an application with the Virginia Corporation Commission for a general rate increase in its 13 Virginia exchanges.

The company, which took over the Virginia properties in 1953, stated that at that time, the Virginia property included five exchanges — Richlands, Grundy, Tazewell, Pocahontas and Bluefield.

These exchanges had a combined net plant of $1,434,555 and were providing service for some 6,000 telephones. Only one exchange was dial.

Over the past seven years, General

has provided dial service in the four exchanges formerly served on a manual basis, and has put in completely new dial equipment in the one office that was dial at the time of purchase.

The company has also opened up eight completely new dial exchanges, and has spent nearly 4 million dollars adding to and improving its facilities in Virginia, according to W. N. Scholl, General's West Virginia-Virginia vice president and division manager.

This has brought about an increase of telephones from 6,077 to 11,578 or a 91 per cent increase in seven years, Mr. Scholl said.

The new level of rates requested is designed to enable the company to meet higher costs which have risen substantially since the old rates were placed into effect in 1955.

The company is asking that its net income be increased by approximately $82,300 per year. In order to get this amount, it must ask for $178,400, the difference being the effect of local, state and federal taxes and uncollectibles, Mr. Scholl explained.

OK Stock Issue, Ask EAS, Raise Approvals in Illinois

The Illinois Commerce Commission on June 6 authorized General Telephone Co. of Illinois to issue 100,000 shares of its $2.50 cumulative preferred stock having a total stated value of 5 million dollars (TELEPHONY, May 20).

The General company also has asked the commission for permission to provide extended area service between its Morton exchange and the Peoria exchange of Illinois Bell Telephone Co.

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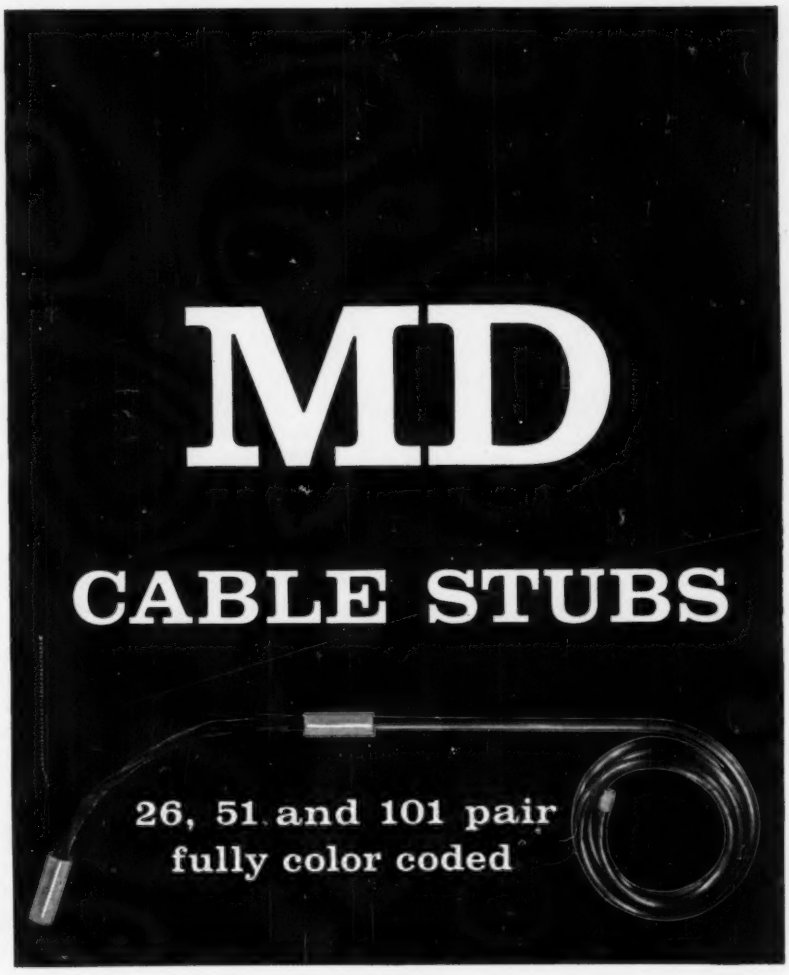
Also in Illinois, the Leaf River Valley Telephone Co., Leaf River, has asked the commission for permission to raise rates.

West Coast Company Negotiates Bond Sale

The West Coast Telephone Co., Everett, Wash., has negotiated the sale of 4 million dollars worth of first mortgage bonds, subject to approval by the Oregon Public Utility Commissioner. The 5 per cent bonds are due in 1990. Proceeds will be used for construction and to pay off short-term bank loans.

Purchasers are: Aetna Life Insurance Co., 1.5 million dollars worth; Pacific Mutual Life Insurance Co., $900,000; California State Teachers Retirement System, $750,000; the California State Employes Retirement System, $500,000; Modern Woodmen of America, $250,000 and Bankers Life Insurance Co. of Nebraska, $100,000.



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REA Approves Twelve Loans Totaling $6,985,000

TELEPHONE LOANS approved during the week of June 12-17, and totaling $6,985,000 will aid telephone systems in 12 states, as follows:

Gulf Telephone Co., Foley, Ala.; $2,425,000; June 13.

With the aid of these funds, supplemented by $200,000 from future earnings of the company, Gulf Telephone will be enabled to furnish initial service to 3,231 subscribers in the present service area. In order to provide this service, the borrower plans to create new exchanges and construct new dial central offices at Bon Secour and Summerdale.

The loan funds are also intended for system improvements to provide a higher grade of service for existing subscribers; and to expand present headquarters and toll center facilities at Foley to allow for increased system requirements. In addition, provision is made in the loan for the installation of mobile dial radio telephone equipment to serve 30 mobile subscribers, and for system maintenance.

REA loans to this company will help make possible new and improved service to 6,908 subscribers. Eight of the proposed 10 exchanges now furnish dial service to approximately 3,000 subscribers.

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Iowa-Illinois Telephone Co., New London, Ia.; $917,000; June 13.

The company plans to use the loan to help improve service for 1,512 subscribers and to furnish new service to 204 subscribers.

Iowa-Illinois plans to acquire the following properties with the aid of the loan and its own general funds:

Paullina (Ia.) Telephone Co., Southwest O'Brien Telephone Cooperative Telephone Co., Paullina; Lytton (Ia.) Telephone Co.,; and the Farmers & Merchants Telephone Co., Linn Grove, Ia. These facilities now provide common battery and magneto service to the existing subscribers.

New dial central offices are planned at Linn Grove and Lytton, and a combined branch commercial office-dial office building will replace the existing facilities at Paullina. This branch office will serve the three new exchanges.

REA loans to Iowa-Illinois will assist it to bring new and improved service to 23,744 subscribers in Iowa, North Dakota, and in Missouri. Forty of the proposed 49 exchanges now furnish dial service to approximately 18,900 subscribers. Thirty-six of the exchanges are in Iowa; and four in North Dakota.

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The Kanokla Telephone Association, Anthony, Kan.; $496,000; June 13.

Kanokla plans to use these funds to help improve service for 503 subscribers and furnish initial service to 91 subscribers in Kansas; and in Oklahoma.

The borrower has acquired from the Western Light & Telephone Co. the Hardtner (Kan.), exchange, and access rights to that portion of the Kiowa exchange which serves in Oklahoma. Provision is made in this loan to reimburse the borrower for these acquisitions.

In addition, the Kanokla cooperative has acquired, at no charge, access rights to the areas served by the Driftwood Telephone Co., Capron, Okla., and the Manchester (Okla.) Telephone Co. The acquired facilities now provide magneto service to 503 subscribers, who will receive improved service as a result of this loan.

New dial central offices are planned for construction at Hardtner, Kan.; and at Capron and Manchester, Okla.

REA loans to Kanokla will help enable it to bring new and improved service to 2,302 subscribers in Kansas, and four in Oklahoma. Eight of the proposed eleven exchanges now furnish dial service to approximately 1,290 subscribers.

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Woodstock Telephone Co., Ruthton, Minn.; $288,000; June 13.

This loan will help to improve service for 425 subscribers and furnish initial service to 78 subscribers. The borrower plans to acquire the Russell (Minn.) Telephone Co., and the Deuth Telephone Co., Holland, which now furnish common battery and magneto service to the existing subscribers. New dial central offices will replace the present switchboards at Holland and Russell.

REA loans to the Woodstock company are intended for use in bringing new and improved service to 1,196 subscribers. Three of the proposed five exchanges of the system are now furnishing dial service to approximately 630 subscribers.

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Paul Bunyan Rural Telephone Cooperative, Bemidji, Minn.; $79,000; June 13.

This loan will help the company to improve service for 59 subscribers and furnish initial service to 40 subscribers. The borrower has recently acquired the Red Lake Reservation Telephone System from the Department of Interior; and the Minneapolis, Red Lake & Manitoba Railway Co. facilities, consisting of 36 miles of toll line extending from Bemidji to Red Lake. The existing subscribers are now served through the Red Lake Indian Reservation telephone facilities. Provision is made in the loan to reimburse the borrower for these acquisitions.

The cooperative plans to construct a new dial central office to replace the central office facilities at Red Lake.

Paul Bunyan plans to use this loan to help make possible new and improved service to 1,873 subscribers. Five of the proposed seven exchanges of the system are now in operation.

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Southern Tier Telephone Co., Apalachin, N. Y.; $183,000; June 13.

This loan will aid the company to improve service for 188 subscribers and furnish initial service to 123 subscribers.

The borrower proposes to acquire with its own funds, the Chemung Telephone Co. now providing dial service to the existing subscribers.

A new dial central office building to replace the present central office facilities at Chemung, is planned for the expanded portion of the system.

Loans to this borrower will help enable it to bring new and improved service to 1,998 subscribers in New York; and in a fringe area of Pennsylvania. One of the proposed three exchanges is now in operation.

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North State Telephone Co., Mount Vernon, Ore.; $221,000; June 13.

The company plans to use this loan to help improve service for 257 subscribers and furnish initial service to 61 subscribers.

This new borrower of REA funds, a commercial corporation, plans to acquire and rehabilitate facilities of the Mt. Hood Telephone Co., Dufur. It proposes to acquire these facilities with loan funds, plus its own common stock. The subscribers who will receive improved service are now served through the magneto facilities of the Mt. Hood company; and a new dial central office will be constructed at Dufur.

James W. Damon is president of the North State Telephone Co.

LaCenter (Wash.) Telephone Co.; $134,000; June 13.

This loan will assist LaCenter to furnish initial service to 112 subscribers. In order to provide this additional service, the borrower plans to extend its service area. Also, new dial central offices will be constructed at Cougar and Yale.

REA loans to this company will help benefit 558 subscribers. The completed system will consist of five exchanges of which three now furnish dial service to approximately 460 subscribers.

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Chibardun Telephone Cooperative, Dallas, Wis.; $148,000; June 13.

Assisted by this loan, the cooperative will be enabled to provide dial service to 58 subscribers, to whom the Wisconsin Public Service Commission has directed the company to provide service. They will be served from the borrower's Dallas and Cameron exchanges.

REA loans to Chibardun Telephone will assist it to bring new and improved service to 2,982 subscribers. Five of the proposed seven exchanges now furnish dial service to approximately 1,485 subscribers.

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Gem Telephone Co., LaPlata, Mo.; $1,114,000; June 14.

With the help of this loan the company will be enabled to provide improved service to 2,502 subscribers and initial service to 397 subscribers.

The Gem company, a new borrower of REA funds, a commercial corporation, now furnishes dial service to 1,275 subscribers through central offices at Elmer, LaPlata and South Gifford. It proposes to acquire with the loan and its own funds, the Home Telephone Co., Perry, now furnishing common battery and magneto service to 634 subscribers.

In addition, the Home company serves these three small companies: Laddonia Rural Telephone Co.; Santa Fe Mutual Telephone Co., and the Stoutsville Telephone Co., which now serve 593 subscribers and switchers. The areas of these three companies will also be certified to the borrower when the Home Telephone Co. aequisition is consummated.

The subscribers who will receive improved service under this loan are now served by the borrower and the acquired facilities.

It is planned that the Elmer, La Plata and South Gifford dial offices will be retained in place, but the dial facilities will be expanded. New dial offices will be constructed at Laddonia, Santa Fe and Stoutsville. A combined

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collection-dial office will be built at Perry to serve the four new exchanges of the Gem system.

A portion of these funds will also be used to refinance the borrower's existing indebtedness.

H. Scott Gault is both president and manager of the Gem Telephone Co.

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Mid State Telephone Co., Kimball, S. D.; $79,000; June 14.

The borrower plans to use this loan to help it furnish initial service to 133 subscribers, and a few others in a fringe area.

Mid State also proposes to enlarge the dial facilities in its Ft. Thompson exchange.

Loans to this cooperative will help enable it to bring new and improved service to 2,239 subscribers. The eight exchanges of the system are now furnishing dial service to approximately 1,840 subscribers.

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Ben Lomand Rural Telephone Cooperative, McMinnville, Tenn.; $901,000; June 14.

With this loan Ben Lomand will be aided to provide initial service to 342 subscribers in the present service area, complete its authorized system, make improvements which will provide a higher grade of service for the existing subscribers, and install mobile radio telephone equipment for system maintenance. Facilities required to serve the new subscribers will include expanded central office equipment.

REA loans to Ben Lomand will help enable it to bring new and improved service to 5,701 subscribers. The fifteen exchanges of the system are now furnishing dial service to approximately 4,325 subscribers.

Ore. Commissioner Approves Creation of Pacific NW Bell

Oregon Public Utility Commissioner Jonel C. Hill was reported on June 26 to have approved creation of Pacific Northwest Bell Telephone Co. out of the northwest operations of Pacific Telephone & Telegraph Co., after receipt of a written agreement from the companies asserting that they would not pass on added corporate costs of the realignment to ratepayers in Oregon.

Commissioner Hill said the plan caused him grave concern "because it contained the threat of a future rate increase and so he asked the agreement to safeguard Oregon customers."

Approved by stockholders in March, the plan provides for the transfer of Pacific Telephone & Telegraph assets in Oregon, Washington and Idaho to Pacific Northwest Bell Telephone Co., which is to have headquarters in Seattle (TELEPHONY, June 17).

The corporate change was approved early in June by the Washington Public Utilities Commission. The companies do not require the approval of California for the proposal.

The commissioner said the agreement he had obtained from the two companies specified that the composite cost of all debts of both corporations could be used to determine a fair rate of return from Oregon intrastate operations.

Northwest Bell said it would not ask that the reduction in earnings brought about by higher debt costs be passed on to the consumer.

Propose Dial Rates For Nevada Exchange

California Interstate Telephone Co., Victorville, Cal., has asked the Nevada Public Service Commission for permission to raise rates at its recently purchased Glenbrook, Nev. exchange.

Rates proposed are: One-party business, $12.60; two-party business, $9.15; four-party business $8.00; one-party residence, $5.75; two-party residence, $5.10; four-party residence, $4.15.

The proposed rates are for dial service.

Approve Eight Exchange EAS Complex in Kansas

The Kansas Corporation Commission on June 14 approved the application of the United Telephone Co. of Kansas, Inc., Abilene, to establish the Hiawatha extended area service complex.

Under this plan, toll free calling will be provided between the following eight exchanges: Hiawatha, Morrill, Hamlin, Reserve, White Cloud and Powhattan, served by the United company and Robinson, served by the Rainbow Telephone Co., Everest.

OK Minn. EAS Dial Rates

The Minnesota Railroad & Warehouse Commission on June 21 approved a schedule of rates for EAS between the Osage and Wolf Lake exchanges of the East Otter Tail Telephone Co., Perham, and between the Osage exchange and the Park Rapids exchange of the Northwestern Bell Telephone Co., rates to become effective on cut-over and completion of improvements for EAS.

New Rates for 4 Ia. Towns

General Telephone Co. of Iowa on June 6 was to have made rate adjustments at four exchanges, according to K. J. Griffin, division manager. New rate schedules were to be effective for Lake City, Lohrville, Pomeroy and Rockwell City.

Huether, General of Ky. Board Chairman, Retiring

Harry J. Huether Jr., chairman of the board of General Telephone Co. of Kentucky, was to retire on July 1, after 38 years of service in the telephone industry. However, Mr. Huether will continue on the board, and the post of chairman will not be filled, it is announced.

H. J. HUETHER

Mr. Huether has served with General Telephone of Kentucky since 1950.

A native of Hastings, Pa., he attended Pennsylvania State College, where he majored in electrical engineering.

Mr. Huether began his telephone career in 1923. After six years with the Bell Telephone Co. of Pennsylvania, he became telephone engineer for the Pennsylvania Public Utility Commission.

In 1935, he joined the General Telephone System as general commercial superintendent of the Pennsylvania Telephone Corp., predecessor of the General Telephone Co. of Pennsylvania. He was later elected vice president of that company, a position he held until 1943.

Moving to Ohio late in 1943, Mr. Huether became vice president and general manager of the Ohio Associated Telephone Co., a predecessor company of General Telephone Co. of Ohio.

In 1946, he became vice president and a director of the General Telephone Directory Co.

Mr. Huether was appointed general commercial superintendent of a group of General Telephone operating companies in Indiana, Michigan, and Kentucky in 1948.

Two years later, in March, 1950, he was elected president of the Lexington Telephone Co. and of the Ashland Home Telephone Co., both predecessors of General Telephone Co. of Kentucky. Then, on July 1, 1960, he became board chairman of General Telephone of Kentucky.

N. C. Telephone Buys Stock Of 58-Year-Old Pinebluff

The Pinebluff Telephone Co., Pine Bluff, N. C. has sold its stock to the North Carolina Telephone Co., Inc., Matthews, N. C.

E. H. Mills, manager of Pinebluff, and Lynn D. Garibaldi, president of N. C. Telephone, in announcing the purchase on June 16, said North Carolina Telephone purchased all of the capital stock of Pinebluff and will operate it as a wholly-owned subsidiary. Mrs. Dorothy L. Short will continue as office manager at Pinebluff and Earl Collins will continue there as maintenance director.

United Sells LP-Gas Properties To Phillips

The liquefied petroleum gas properties of United Utilities, Inc. were acquired by Phillips Petroleum Co., through an exchange of stock on June 15, it was announced by C. A. Scupin, president of United.

The United Propane Cos., wholly-owned subsidiaries of United Utilities, operate nine major LP-gas plants in south central Illinois.

United Utilities is the second largest Independent telephone system in the United States, with assets of 172 million dollars, and total revenues of $48,410,000 for the year ended Apr. 30. The assets and net revenues of the propane affiliates accounted for less than 2 per cent of the system's total.

"The acquisition of the propane interests by Phillips will permit United to concentrate capital and management on utility operations," Mr. Scupin said. In addition to its 495,000 telephone subscribers in 15 states, United also has 18,850 power, natural gas and water customers in Kansas.

Incorporate in Oklahoma

Cameron Telephone Corp., Poteau, Okla., has been incorporated with capital stock of $20,000. Incorporators are J. W. and Jack K. Holt of Stilwell, Okla.; Ross J. Holt of Poteau and Carl G. Holt of Shreveport, La.

Huge Traffic Injuries

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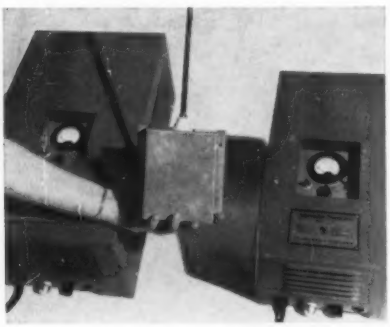
News on New Products

SELECTIVE PAGING—A more flexible version of the Pagemaster selective wireless paging system—one that can be operated from several different locations—has been announced by General Dynamics/Electronics.

The new system is an outgrowth of the Pagemaster system first introduced three years ago but differs from its predecessors in a primary component.

The change is in the encoder unit or means of placing a "page." In the new Pagemaster version, it consists of a telephone-like dial rather than the familiar rows of knobs on a conventional Pagemaster encoder that operate much like those on a bicycle lock or a safe.



An all-transistorized, fully-weatherproofed 100-miliwatt transmitter that can fit in the human hand has been developed by General Dynamics/Electronics for use with its Pagemaster selective wireless paging system.

Using a standard Pagemaster encoder unit, a "page" is made by turning a series of three knobs on the encoder to indicate a number such as "234," then a toggle switch is flicked. This sends out an electronic signal to a transmitter which, in turn, activates a pocket-sized receiver and causes that instrument to buzz.

The new system introduces a dialing system like that of the telephone and allows small dial instruments (Petite-Phone size but without hand sets)—to be placed at widely separated points as much as 12 miles from the actual encoder equipment. Users dial a three-digit number to place a "page."

Thus, the new system eliminates the need for all Pagemaster signals to be set up from a single location, a benefit in a large plant, for example, and greatly simplifies the setting up of a "page." Up to three instruments are used in a primary installation.

The other major components of the new system are a transmitter, antenna and pocket receivers carried by persons tied in with the Pagemaster system.

The new system also differs from the standard system in the operation of its signals. Standard Pagemaster encoders send out signals every 20 seconds until the signal is manually turned off at the encoder when the paged person has called in for his message.

The new system sends out but three consecutive pages—seconds apart—and then shuts off automatically. If the paged party does not respond within a reasonable amount of time, another page must be placed.

While a page is being placed on one dial instrument, lights on boxes in other locations indicate that the network is in use, just as they do on push-button telephones. The company states a single page is made in 20 seconds, including dialing and the actual signalling of the chosen number. Then the lights go off and all dial instruments are ready for their next page. Thus, up to three pages can be made per minute.

While the primary system is set up for three dial instruments, other boxes can be added if desired. With each additional dial instrument over three, however, another relay box must be included in the system.

All dial instruments, including additional ones over the primary three-instrument hookup are connected to the encoder by a single pair of wires.

Both standard and dial Pagemaster systems operate in the Citizens Band as well as in the 35 and 43-megacycle bands used for city-wide paging. There is no charge for FCC licensing in any of these frequencies and licenses are usually issued about 40 days after application, the company reported.

With the normal five-watt transmitter, Pagemaster systems are usually operable within a one-mile radius, but a 30-watt transmitter that increases range of the system to 3 miles also is available. Larger areas can be covered by installing multiple transmitters such as was done at the 1961 Presidential Inaugural when an area 12 miles long was covered by a special Pagemaster installation.

A high-powered transmitter (up to

A more flexible version of the Pagemaster selective wireless paging system—one that can operate from several different locations using Petite-Phone-size encoder units without hand sets such as the one above—has been introduced by General Dynamics/Electronics. The several dial instruments replace the usual single location encoder box from which "pages" normally are transmitted.

TELEPHONY PUBLISHING CORP.
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Chicago 5, Ill.

Please have the manufacturer send me without obligation the literature indicated by the following numbers:

NP1665_____; NP1666_____; NP1667_____; NP1668_____;
NP1669_____; NP1670_____.

Name .....

Company .....

Street .....

Town and State .....

7/1/61

500 watts) can be used for city-wide coverage. Request NP1665.

•

ATRC CABLE—The Anaconda Wire & Cable Co. has introduced a new ATRC cable especially adaptable for aerial, duct and direct burial use in telephonic communication circuits, telemetering, automatic relays, supervisory control for monitoring and data recording.

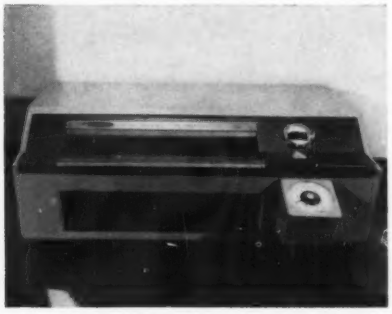
Robert E. McIlvane, manager—Communications Products Division, said the new cable is now in production and would have a rating of 300 volts.

Mr. McIlvane pointed out that the new cable is adaptable to public utilities, pipe line companies, railroads and industrials. Request NP1666.

•

GUIDE FOR MAKING COPIES—A new exposure guide to help the operator select exact dial settings for making copies is now available on Minnesota Mining & Mfg. Co.'s Thermo-Fax "Fourteen" copying machines.

A glance at the guide, mounted just below the on-off switch, tells what dial setting to select for the type of copy paper being used.



Exposure guide kits are available for mounting on machines already in use and the guides are optional on purchase of new models. Request NP1667.

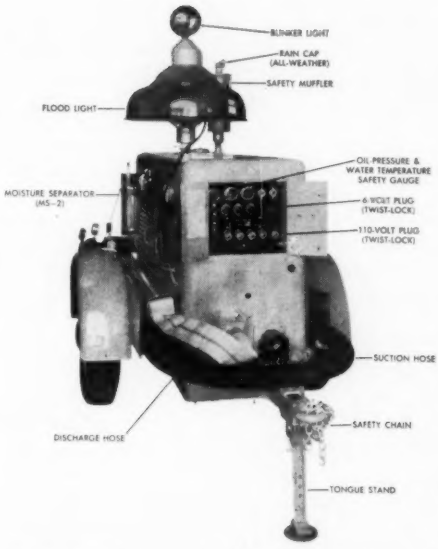
•

DIGITAL DATA TRANSMISSION SYSTEM—The Hallicrafters Co. has announced its CTDS 2400 digital data transmission system for voice communication channels for use wherever digital data must be transmitted between widely separated locations: military field data systems, centralized computer control of pipe lines, electric utility load control, branch warehouse inventory control, and machine tool numerical control data centers, for example.

The system transmits the equivalent of 32 teletypewriters over a single voice communication channel with a maximum error rate of 1 bit in 10^5 using ordinary wire telephone lines or UHF, VHF and microwave carrier systems.

Pioneers in CONTINUOUS FEED PRESSURE SYSTEMS & MAINTENANCE EQUIPMENT

"VERSATILE" is the word for it



Check the features on the illustration, then write for our Bulletin MPU-1-61.

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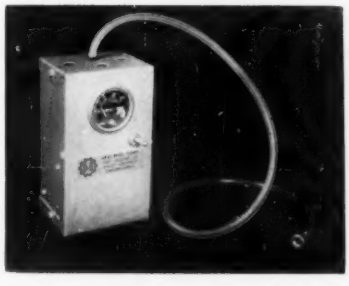
Having an S & G Mobile Power Unit on the job (or a fleet of them if you know your maintenance short-cuts), is like owning a gold mine — you can't lose!

This versatile unit is everything to all maintenance crews — rolled into one light, easy to handle package.

NEW! NEW! NEW!



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Part No. 8279

Used when cable is plowed in under pressure. When cable sheath is damaged in process of plowing in, the alarm will sound indicating damage of sheath and location can be marked and damages repaired.

Write for our Bulletin 8279-1-61 for full details.

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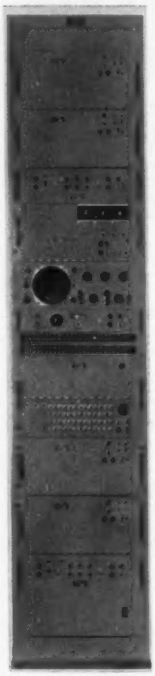
The CTDS 2400 has been developed by Hallicrafters to allow data acquisition and processing systems to communicate over low-cost, universally available commercial-quality voice communication channels. High-speed transmission of digital data is possible with maximum reliability—without the need for many costly equalization networks, the company states.

Voice communication channels are designed to transmit audio frequency signals between 300 and 3,000 cycles per second, whereas digital data signals are usually in the form of binary "dc" pulses—the "language" of digital computers. Binary pulses cannot be transmitted along voice channels and recovered at the receiving end with any degree of reliability.

The Hallicrafters CTDS 2400 system —consisting basically of a transmitter and a receiver—converts binary pulses to an audio frequency signal which can be transmitted and demodulated in the receiver to yield the original signal with a maximum error possibility of only one bit in 100,000.

The Hallicrafters CTDS 2400 system transmits at the preferred military field data rate of 2400 bits per second. This, according to the company, is a higher data rate than can be handled reliably by conventional modulation techniques within the frequency limits of the typical telephone line. Through special



coding techniques, the CTDS 2400 system actually increases the data-rate capability in the usable portion of the telephone line frequency spectrum by more than 10 per cent. At the same time the transmitted information is relatively unaffected by signal fading or noise in the communications medium.

The increased data rate, high signal reliability, and resistance to noise, are accomplished by a unique data companding technique, Hallicrafters reports. The data to be transmitted is translated to a special high-reliability code that cannot be easily "misread" by the receiver.

The company says all system operations are controlled by a coherent timing generator that prevents the system getting out of step or producing erroneous data due to lack of synchronization. The use of coherent transmitter-receiver links permits operation in the presence of noise and other distortions.

The Hallicrafters CTDS 2400 digital data transmission system can be equipped with input and output devices compatible with any commercial or military digital data system requirement, including five-channel through eight-channel punched tape equipment.

The CTDS 2400 can be packaged for mobile, airborne or shipboard operating environments, and is suitable for unattended operation. Solid-state circuitry

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with conservatively rated components and modular construction is used throughout, the company states. Test points are liberally provided for checking and trouble-shooting without dismantling the equipment.

Accessory equipment includes: word generator, printed circuit card tester, noise source, trouble detector and transfer unit, match and parity error counter. Request NP1668.

■

SAFETY AND LOWERING DEVICE —The "Sky Genie," a shock-absorbing safety device, used for the controlled lowering of personnel and equipment, has been introduced for the utility market by Atlas Safety Equipment Co., Inc.

The unit (see illustration) may be used with a safety belt, boatswain's chair, or stretcher, and according to the manufacturer, has many applications, including use by telephone and utility companies.

The "Sky Genie" provides complete one-man control and requires only finger tip pressure for start, stop, or deceleration, Atlas Safety states. The rate of descent is predetermined, and control is effected either by the person lowering himself, or by a person located above, or below the point of anchor. This unit is said to enable complete and safe suspension, such as may be desirable for maintenance, repair, and rescue work.

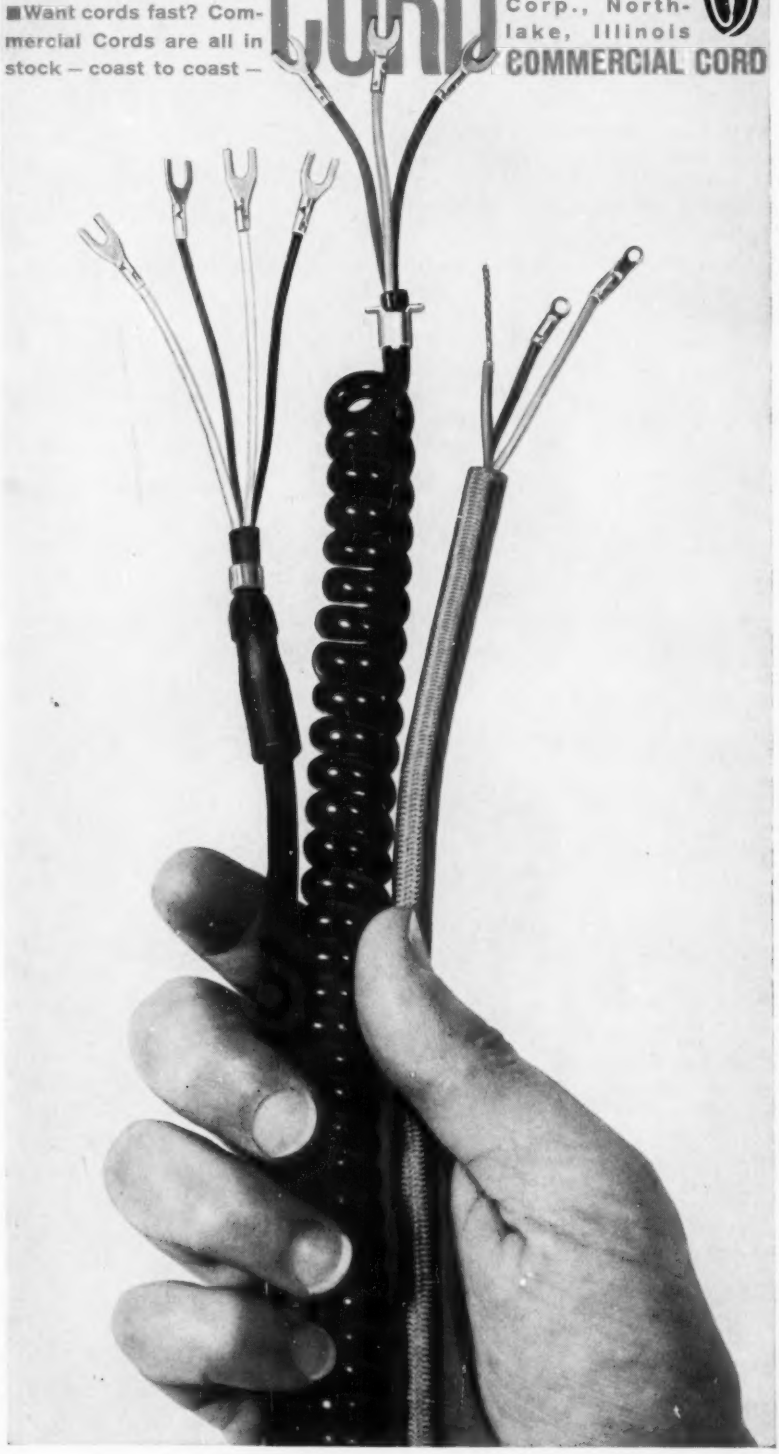
"Sky Genie" is used also to limit the extent of free falls, when used with life lines, the manufacturer reports.

This lowering device operates on the principle of friction, and consists of an aluminum shaft furnished with a length of strong, light-weight nylon line. The rate of descent is predetermined by the

...any cord. Commercial Cord has it! Patch cord, test cord...phone or intercom...straight cord or Spiraflex®...nylon jacket or colored PVC...standard, or any length or termination—Commercial Cord makes them all! ■Want cords fast? Commercial Cords are all in stock—coast to coast—for fast shipping to you. ■Get catalog, samples, prices from Commercial Cord Co., Clifton Springs, N.Y. Distributed by: Leich Sales Corp., 427 W. Randolph St., Chicago 6, Ill.; Automatic Electric Sales Corp., Northlake, Illinois

PiCKa CORD

COMMERCIAL CORD



number of times the line is turned around the aluminum shaft, this depending on the job to be accomplished, and the weight of the person or object lowered.

Tested to a minimum of 1500 pounds, "Sky Genie" is available with 20, 50, 100, 150 or 200-ft lines.

The complete unit weighs less than one pound, and measures only 2 inches in diameter and 9 inches in length. Request NP1669.

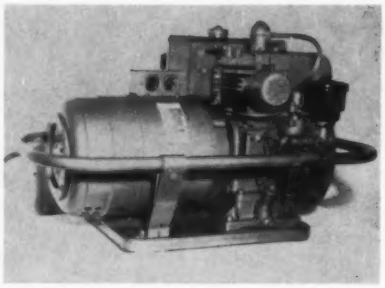
•

PORTABLE ENGINE GENERATORS —The Katolight Corp. has announced a new series of portable engine generators, designed to provide dependable power for operating tools, lights and appliances.

These generators are available in sizes of 1,000, 2,000, 3,000 and 4,000 watts ac, 3,600 RPM; and in what the company terms a "new, longer-life 1,800 RPM series" starting at 750 watts, and up for electric, remote, demand starting, and automatic transfer arrangements.

Special features of the Katolight portable generators include:

Briggs & Stratton engines.
Pull starter.



Protective carrying frame.
Rubber mounts.
Convenient receptacles.

Request NP1670.

Telephone Loan Security Requirements Revised by REA

The Rural Electrification Administration has revised its loan security requirements for telephone borrowers, the U. S. Department of Agriculture announced on June 16.

In a new policy bulletin, REA sets equity and other loan security standards that will encourage local ownership of rural telephone facilities, and at the same time discourage attempts at speculative ventures with telephone loan funds.

Principal changes and additions include the following:

(1) A new requirement that where the proposed system is not locally owned and controlled, owners must provide a specified minimum net worth as a condition of obtaining the loan. This becomes one of six factors used by REA in determining that a loan for improving and expanding telephone facilities in rural areas is reasonably secure.

(2) As a general rule, REA will not require additional net worth to secure loans required for improving and extending service within areas already established through prior REA loans.

(3) An applicant must obtain REA approval of acquisition proposals before making commitments. REA will not approve the loan if in its opinion the acquisition price is so high as to seriously affect the level of rates. The price to be paid for the acquisition will be a matter of primary concern to REA in view of its effect on the cost of service to the borrower's subscribers and of its relationship to the general level of prices for acquisitions by other borrowers.

(4) REA will not approve a loan for the purchase of property that is not a logical extension of the existing system. This is to encourage borrowers to establish integrated service areas based on the geography of the locality and on the needs of the telephone subscribers.

(5) For purposes of meeting the specified net worth requirement, REA will not recognize as equity, funds obtained from sale of stock, if either (a) the stock is purchased by a corporation which is already an REA borrower, or (b) the stock is purchased with funds borrowed from a corporation which is already an REA borrower. This requirement will preclude the use of assets of an existing borrower as equity to meet the minimum net worth requirement of some other applicant for a loan.

(6) The mortgage which the borrower signs with REA will contain provisions prohibiting the corporation from making loans or advances to officers, directors, stockholders, or employes.

The changes apply only to new telephone loans and have no bearing on loan contracts REA already has signed with its borrowers.

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V. I. Telephone Borrows $1 Million for Cut-Over

The Virgin Islands Telephone Corp. has arranged to borrow 1 million dollars to assist in financing its conversion to dial of telephones in the islands, Stephen H. Larrabee, president, announced on June 21.

The Chase Manhattan Bank has agreed to lend the corporation $500,000; and the First Pennsylvania Banking & Trust Co., in Philadelphia, with its affiliate, the Virgin Islands National Bank, has also agreed to lend $500,000.

Larson Represents Koehring

Larson Equipment Co., Los Angeles, Cal., has been appointed the southern California distributor for the Koehring,

Parsons, and Kwik-Mix lines (as well as other Koehring lines), according to an announcement from the Koehring Co. of Milwaukee, Wis. Larson Equipment is located at 3838 Santa Fe Ave., Los Angeles, Cal. Jack Larson is company president.

IN THE NATION'S CAPITAL

Concluded from page 18

of the workers to free speech. He quoted the famous remark by Thomas Jefferson that "to compel a man to furnish contributions of money for the propagation of opinions which he disbelieves is sinful and tyrannical."

Justice Whittaker in another dissent said that the bare majority (Brennan) opinion's effort to save the closed shop by merely ordering the return of any proven misspent dues was impractical. It still puts politically minded unions in a position to pick their members' pockets for political propaganda support, leaving to dissenting workers the expensive burden of proving any complaint about the purpose for which said dues are to be spent.

Maybe the Georgia court, in the next round in the Looper case, will come up with a workable solution. Judge Brennan's suggestion sounds like Eddie Cantor's old vaudeville story about the crooked gambler who raffled off a dead race-horse. When the raffle winner protested, the gambler said: "Here's your ticket money back. So, what are you arguing about?" Maybe the Georgia railway workers will get a little better break from their union, but don't bet a ticket on it. If Nancy Looper and her friends get back enough of their dues payments to pay off their lawyers in this case, it will be surprising.

Mooney Elected ITT Vice President—Defense Group

Charles M. Mooney has been elected vice president—U. S. Defense Group, Harold S. Geneen, president of International Telephone & Telegraph Corp., has announced.

Previously, Mr. Mooney was director of government relations and of the world-wide integrated systems for ITT, with headquarters in Washington, D. C. In his new position, he will direct all of the United States defense activities of the corporation.

He succeeds Adm. Ellery W. Stone, who will continue as vice president, director of the parent corporation, and assistant to the president, as well as chairman of the board of American Cable & Radio Corp., controlling interest of which is held by ITT.

Experienced in military business activities both in the United States and

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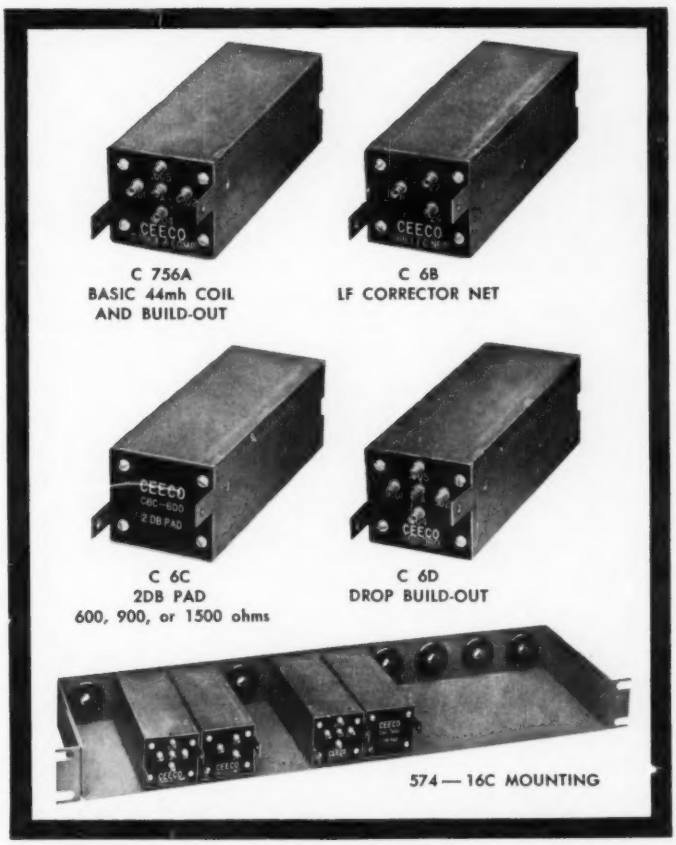

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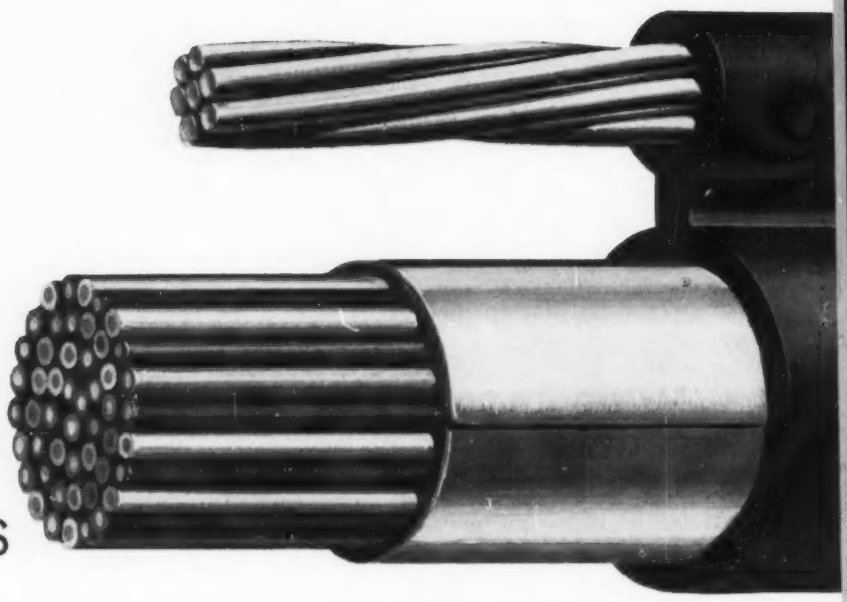

GENERAL CABLE'S

FIGURE 8 QUALPETH*

ends cable spinning...saves you time and money

Here's a great new cable that saves you time and money on outside plant construction. Figure 8 Qualpeth combines the cable and messenger in a single jacket of tough polyethylene. This revolutionary cable makes installation a one-step process. The entire cable-spinning operation is eliminated. Your lineman merely clamps Figure 8 to the pole.

Figure 8 is equipped with your choice of aluminum or copper shield. Normal splicing methods and closures are used. And, best of all, Figure 8 costs less installed than cable and messenger installed separately!

We're saving a copy of the Figure 8 Qualpeth catalog for you. To get your free copy, write: Automatic Electric Sales Corporation, Northlake, Illinois. And the next time you want to extend your outside plant, contact your AE representative. He'll give you all the money-saving details on Figure 8 Qualpeth.

**Trademark of General Cable Corporation*

AUTOMATIC ELECTRIC

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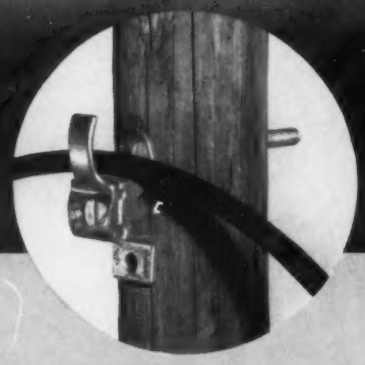
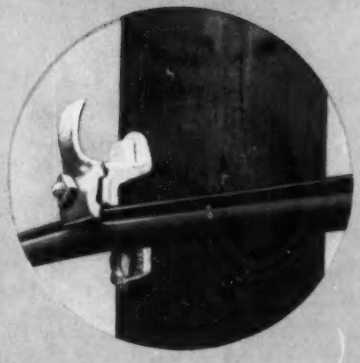
GENERAL SYSTEM



SPECIAL SUPPORT MAKES INSTALLATION EASY
This specially designed clamp is bolted to the pole to serve you two ways. First, the cable is strung over the top of the clamp for easy handling. After tensioning, the lineman just clamps Figure 8 to the pole, and the job's done.



CREW INSTALLS FIGURE 8 FASTER
At a recent installation of Figure 8, the crew saved so much time that the in-place cost was reduced by 10% over the cost of the present cable-spinning methods.

warehouses:

Northlake Illinois Fillmore 5-7111	2915 Moore St. Richmond 21, Va. ELgin 8-9280	2360 N. W. Quimby St. Portland 10, Ore. CApitol 3-7244	158 Corliss Avenue Johnson City, N. Y. RA 9-4996	2021 Main St. Kansas City 8, Mo. HArrison 1-7575

abroad, Mr. Mooney joined the ITT System in 1957, as director of government relations in the United States, after 22 years' service with International Business Machines Corp.

Elect Deal Kearney Vice President for Sales

Robert E. Deal has been elected vice president-sales of the James R. Kearney Corp., St. Louis, Mo.

In his new capacity, Mr. Deal will supervise and co-ordinate the activities of the Kearney sales force; he will also direct and co-ordinate the company's sales and marketing programs.

R. E. DEAL

Mr. Deal joined Kearney in 1960 as general sales manager. Prior to that, he had been manager of marketing for the 3E Co., which was subsequently acquired by the Kearney Corp., and is now Kearney's Melrose Park division.

An electrical engineering graduate of the University of Tennessee, Mr. Deal has also held posts in the electrical apparatus field with Line Materials Industries and the Duke Power Co.

GD/E Appoints Sandner Stromberg Service Engineer

The appointment of Kenneth E. Sandner as a service engineer for Stromberg-Carlson telecommunication products has been announced by David Balis, manager of customer service for the Telecommunication Division of General Dynamics/Electronics.

Mr. Sandner will serve customers on the West Coast, and will work from the Burlingame, Cal., branch office. He succeeds Ralph M. Smith, who has assumed a sales position for the division in northern Nevada and northern California.

Mr. Sandner began his telephone career in 1955 as a Stromberg-Carlson equipment installer. Two years later he advanced to an installation foreman for "XY" dial systems, and was made a foreman for "XY" toll ticketing installations in 1958. His most recent work was at Weaverville, Cal., where toll ticketing and person-to-person, collect and special services were installed.

K. E. SANDNER

He was born in Slayton, Ore., and attended schools in nearby Salem, where he now makes his home. He served for two years with the United States Navy.

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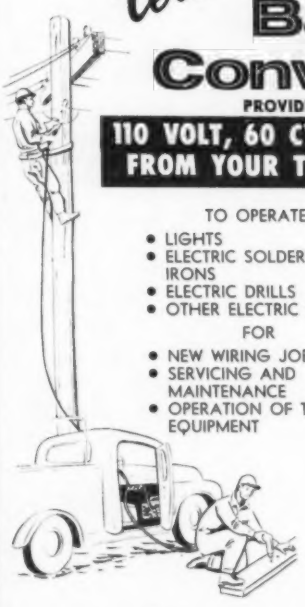

"TRANSISTORIZED" THE CONTINENTAL 275 to 300 watts MODEL 50-193 USERS NET $116.34

THE SUPREME 175 to 250 watts MODEL 50-153 USERS NET $73.34

Both models have remote control

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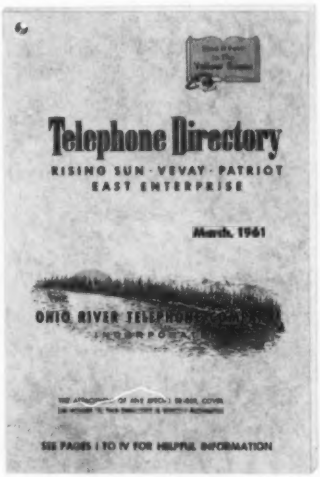

A Directory for the

Ohio River Telephone Company

Printed by

R. R. Donnelley & Sons Company

350 East Twenty-second Street, Chicago 16

MISSOURI-KANS. CONVENTION

Concluded from page 34

whatever steps are necessary to assure that REA and its borrowers carry on the program in keeping with the spirit as well as the letter of the Rural Electrification Act. . . .

"In summary, REA is ready, willing, and able, within the limits of authority established by the Rural Electrification Act, to do everything necessary to help you get on with your obligations and your opportunities. We don't want to see anybody go out of business for lack of support in extending and improving rural telephone service.

"I think I have made it clear that we have no interest in making millionaires out of any of you. We will not permit the rural telephone program to become a tool for speculation and overnight empires. It is, rather, a tool for service to people. REA's objective is service to people. I think that is also your objective."

Following the convention, the Missouri and Kansas associations elected directors and officers, as follows:

Missouri Telephone Association

Directors elected: R. E. Williams of Oregon; C. W. Chastain of Princeton; F. B. Hunt of St. Louis; Elizabeth Journey of Higginsville, and J. L. VanHorn of Grinnell, Ia.

Other directors: O. C. Agne, of Wentville, Jack E. Bartruff of St. James, P. A. Browne of Clarence, C. T. Davis of Sullivan, E. J. Ernest of St. Louis, J. G. Kreamer of Kansas City. F. B. McHenry of Jefferson City, Walter Mitchell of Seneca, J. M. Roberts of Gallatin, and W. R. Trowbridge of Springfield.

Officers: President, Mr. Bartruff; vice president, Mr. VanHorn; secretary-treasurer, J. W. Slemmons of Jefferson City, and assistant secretary-treasurer, Katharine A. Bauer of Jefferson City.

Kansas Telephone Association

Directors elected: Joe Chilen of Ulysses, Howard Ellis of Haviland, Paul Grauer of Wilson, and Gilbert Stevenson of Belleville.

Other directors: Howard Culbertson of Sterling, T. B. Fegan of Junction City, W. E. Gault of Gardner, B. F. Givens of Topeka, G. A. Hearne of Kansas City, Mo.; Clifford Heidebrecht of Burrton, D. J. McKay of LaCrosse, and H. A. Miller of Great Bend.

Officers: President, Mr. Hearne; vice president, Mr. McKay; secretary, Douglas Gleason of Topeka, and treasurer, John S. Hopkins, Topeka.

Lenkurt Begins Work On Addition to Cal. Plant

Lenkurt Electric Co., Inc., is scheduled to start construction on the second addition this year to its San Carlos, Cal., manufacturing plant.

The new building, to cost about $230,000, will add 21,000 square feet on the west side of the present marketing building, and is expected to be ready for occupancy early in September.

Initial occupants will be two produc-

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tion departments. One will manufacture microwave radio systems for telephone companies, railroads, pipelines and other commercial users of long-distance transmission. The other will produce special 600-channel transmission systems for the U. S. Air Force.

Concurrently work is continuing on another addition of the same size, started earlier, connecting the company's marketing building with the larger manufacturing building. This one, to be completed by Aug. 1, will house stockroom and other manufacturing support activities.

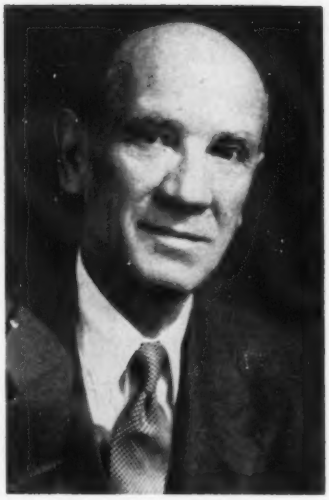
Construction of both projects is of tilt-up concrete type with slab floor and composition roof over steel trussing.

Meanwhile, detailed plans are nearing completion for a third and larger addition, a 128,000-square-foot engineering building to be started in July.

Sherron Metallic Appoints Naderman—Purchasing, Sales

George C. Naderman has been appointed to purchase, sales and development with Sherron Metallic Corp., Brooklyn, N. Y., manufacturer of steel telephone booths.

Formerly buyer for the Western Electric Co. at its New York distributing house, Mr. Naderman is one of several additions to personnel in the servicing and development divisions of Sherron Metallic Corp. in recent months.



G. C. NADERMAN

Blodgett, Waldron Receive New Okonite Appointments

Dr. Robert B. Blodgett has been appointed director of research of The Okonite Co., Passaic, N. J., wire and cable fabricating subsidiary of Kennecott Copper Corp.

The company also named Richard C. Waldron chief engineer, succeeding Dr. Robert J. Wiseman, who retired in 1959, and who now serves as Okonite's cable consultant.

After graduation from Northwestern University with a B.S. degree in chemistry and physics, Dr. Blodgett received his Ph.D. degree in physical and organic chemistry from the University of Wisconsin in 1940.

A member of Okonite's research staff since 1954, he has been concerned with research activities at the Paterson, N. J., plant, in the capacity of manager of paper cable research.

Prior to joining the company, he was chief chemist at Robbins Mills, Inc., Clarksville, Va., and in previous years, engaged in research at Du Pont Cellophane Research, Buffalo, N. Y., and at Du Pont Viscose Rayon Research in Richmond, Va.

After graduation from Harvard University in 1928, where he received his B.S. degree in electrical engineering, Mr. Waldron started his career at Okonite.

He has been active in research, engineering, product development and also in marketing, and has served since 1955 as manager of engineering.

Mr. Waldron initiated the development of rubber-insulated x-ray cables

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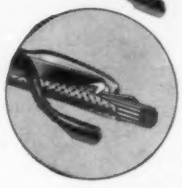

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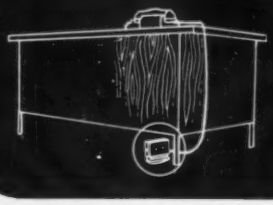

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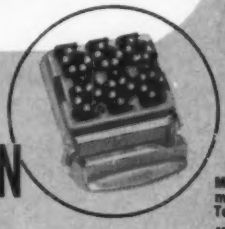

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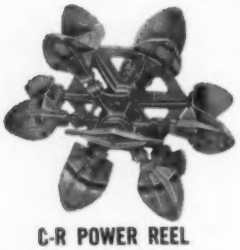

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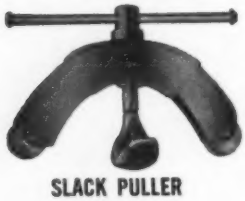

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in 1934. He has been granted a number of patents for special joint designs and was co-inventor of "Dualay" self-supporting aerial cable. He has also done extensive research concerning the effects of lightning and surface discharge on medium and high-voltage cables.

One of Mr. Waldron's principal responsibilities has been to plan for customer-engineered special cable systems.

J. C. Mitchell in Gulf Coast Sales for Reliable Electric

The Reliable Electric Co. has announced the appointment of James C. Mitchell to its field sales force. Mr. Mitchell's headquarters will be in Houston, Tex. He will serve the Gulf Coast areas of Texas, Louisiana and Mississippi.

J. C. MITCHELL

Mr. Mitchell attended the engineering schools of Oklahoma University and Texas Christian University.

His background includes experience in the electrical contracting business in the south-coast area of Texas. More recently, he was in the machine tool manufacturing business.

Parsons Appoints Seastrom Ind. Trencher Distributor

Seastrom, Inc., Indianapolis, Ind., has been appointed a distributor for most of the state of Indiana by the Parsons Co., Newton (Ia.) manufacturer of trenching equipment.

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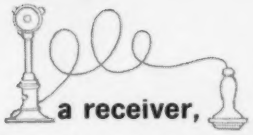
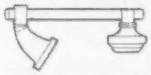
WHAT'S REALLY NEW IN TELEPHONES?

The development of the telephone is a story of paradoxes.

The first instruments had three parts... a transmitter,  a receiver, and a signaling device. Each part was a unit, with only a cord connecting one to the other.

Then an engineer, begrudging the use of both hands to handle the phone, fastened the transmitter to one end of a length of broomstick and the receiver to the other,  just far enough apart so that, with one hand, he could bring the receiver to his ear and the transmitter to his mouth.

Others, seeing this innovation, were quick to recognize its advantages.

It naturally followed that some kind of a base or holder had to be designed to hold the phone, and eventually contain the ringer.

Thus was born the "cradle phone". Later, the dial was added to the base.

This basic "cradle phone" design dates back to the 1890's! And while technological improvements have improved transmission to almost perfect levels, the basic design of the telephone has remained virtually unchanged for nearly 70 years.

Corners have been rounded, new materials used, contours have been "streamlined", color has been added... but the cradle-handset concept is still the same.

There has been one notable exception... THE NORTH ERICOFON!

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Cliff is one of our "Revenue Men" in Madison, Wisconsin.

After high school, Cliff earned his way through some college work before joining the U.S. Air Force in 1942. While on his 25th mission over Germany — and just one day before his scheduled return to the States — Bombardier-Gunner Syverud's B-24 was shot down.

In May 1945 Cliff's prison camp was liberated, and he came home with the Distinguished Flying Cross, Air Medal with three Oak Leaf Clusters and Purple Heart.

In 1954, Cliff became a sales representative for General Telephone Directory Company in our Madison unit. He was promoted to Sales Supervisor of the Madison unit in 1958.

Cliff and his wife have two active boys. They keep Cliff busy, but he still finds time to participate actively in the VFW, American Legion, American Cancer Society, the Red Feather Agency and church affairs.

Cliff Syverud is typical of the "Revenue Men" who work for General Telephone Directory Company — and for you. They're an asset to any community.

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